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Journal for the Protection of Monuments

52

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Institute for the Protection of Cultural Heritage of Slovenia

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Predgovor

V tokratni, 52. številki revije Varstvo spomenikov objavljamo sedem razprav.

V prvem prispevku Polonca Ropret in Tadeja Kosec raziskujeta dejavnike, ki vplivajo na propadanje izkopanih bronastih arheoloških predmetov. V članku *Preiskave bronastih arheoloških predmetov, njihova zaščita in hramba* predstavljata učinkovitost novorazvitega zaviralca korozije, tolil metil imidazola (TMI), pri hrambi in zaščiti te arheološke dediščine.

Reševanju neprecenljivih renesančnih slik iz koprske stolnice sta posvečena naslednja dva prispevka. Od leta 2010 je pod okriljem Restavratorskega centra Zavoda za varstvo kulturne dediščine Slovenije potekal obsežen in zahteven projekt Carpaccio, pri katerem so sodelovali številni domači in tuji strokovnjaki. Leta 2018 so bile slike beneških mojstrov Vittoreja in Benedetta Carpaccia naposled ponovno nameščene v cerkev. Po večletnem delu konservatork-restavratork zdaj spet privabljajo poglede obiskovalcev s svojo mirno, večno lepoto.

Zoja Bajdè, Ermina Frljak Gašparovič, Barbka Gosar Hirci, Sanela Hodžič, Liza Lampič in Andreja Ravnik v članku *Konservatorsko-restavratorski posegi na slikah Pokol nedolžnih otrok in Predstavitev v templju beneškega mojstra Vittoreja Carpaccia* podrobno raziskujejo avtorjevo tehnologijo in pretekle posege na slikah ter dokumentirajo korake, dileme in rešitve tokratnih konservatorsko-restavratorskih posegov.

Barbka Gosar Hirci in Sanela Hodžič v prispevku *Konserviranje in restavriranje slike Marija s svetnikoma Benedetta Carpaccia iz koprske stolnice* podajata nova spoznanja in postopke, ki so vodili h konserviranju-restavriranju Benedettove slike.

Dolga leta je v središču Ljubljane propadala večstanovanjska hiša Meksika arhitekta Vladimirja Šubica, ki je bila zgrajena leta 1927 za uslužbence Mestne občine ljubljanske. Po obnovi ulične in dvoriščne fasade v obdobju od leta 2013 do leta 2019 se je septembra 2019 začel še konservatorsko-restavratorski poseg na stropni poslikavi na oboku uvozne veže. Poslikava Riharda Jakopiča je edino tovrstno impresionistično delo v slovenskem prostoru, ki je neposredno dostopno javnosti. Avtorice Tatjana Adamič, Katja Kavkler in Saša Snoj v članku *Konserviranje-restavriranje stropne poslikave Riharda Jakopiča na oboku uvozne veže v Meksiki* predstavljajo zgodovino stavbe in poslikave, naravoslovne raziskave fresk, postopke restavriranja in rezultate obnove.

Maja Avguštin se v članku *Primeri prezentacij in njihova problematika na fasadah meščanskih hiš* poglobljeno ukvarja s tem segmentom dediščine mestnih jeder. Fasade meščanskih hiš so galerija stilov, trendov, znanja mojstrov in neprecenljiv vir za raziskovanje časa, v katerem so nastale. Kako jih zaščititi pred propadanjem, katere sloje ohraniti in kako varovati njihovo avtentičnost? Avtorica v prispevku razišče zgodovino pristopov ohranjanja dediščine in podaja predloge za reševanje teh izzivov.

Minka Osojnik in Andrej Jazbec v članku *Popotresna obnova cerkve rojstva Device Marije v Policah pri Cerknem* razkrivata usodo te poznogotske cerkve, ki je bila v slabem stanju že pred potresom leta 2004. Seznanjata nas z obnovo v letih 2018 in 2019, ko so na objektu potekala obsežna dela; hkrati s statično sanacijo so potekala tudi zaščitna in konservatorsko-restavratorska dela. Avtorja v prispevku opozarjata tudi na probleme, do katerih lahko pride pri sočasnih gradbenih in konservatorsko-restavratorskih delih.

Članek *Vloga in pomen mednarodnega simpozija etnologov konservatorjev ter njihov prispevek k razvoju konservatorske teorije in prakse* avtorjev Dušana Strgarja in Dušana Štepca je nastal ob dvajsetletnici delovanja tega mednarodnega simpozija. Avtorja kronološko predstavljata razvoj teh srečanj ter njihovo vlogo, pomen, rezultate in prispevke k razvoju konservatorske stroke.

V poglavju *Predstavitve* se je Lucija Stepančič pogovarjala s prof. Ivanom Bogovčičem. Bil je dolgoletni član uredništva te revije in profesor, ki je zaslužen za vzgojo generacij restavratorjev. Kot izvemo v intervjuju, še mnogo več ...

V zadnjem prispevku revije se spet vračamo k etnologiji. Dušan Štepec in Saša Roškar predstavljata *Poročilo in sprejete zaključke okrogle mize z naslovom O etnologiji in konservatorstvu ter o njeni vlogi pri varovanju in ohranjanju kulturne dediščine v 21. stoletju – izkušnje, vloga, izzivi.*

Vabim vas k branju.

Biserka Ribnikar Vasle,
urednica

Foreword

The 52nd issue of *Varstvo spomenikov/Journal for the Protection of Monuments* features seven articles.

The first article of this issue, "Investigation of bronze archaeological artefacts, their protection and storage", examines the factors that influence the deterioration of excavated bronze archaeological artefacts. Its authors, Polonca Ropret and Tadeja Kosec, discuss the effectiveness of a newly developed corrosion inhibitor – tolyl methyl imidazole (TMI) – in the conservation and protection of archaeological heritage.

The next two articles are dedicated to the preservation of the priceless Renaissance paintings from Koper Cathedral. Since 2010, the Restoration Centre of the Institute for the Protection of Cultural Heritage of Slovenia has been running the extensive and complex Carpaccio project, which involved a great number of experts from Slovenia and abroad. In 2018, the paintings by Venetian masters Vittore and Benedetto Carpaccio were finally reinstalled in the church. After several years of work by a team of conservator-restorers, the paintings can again entice the visitors with their composed, timeless beauty.

The article "Conservation-restoration interventions on the paintings *The Massacre of the Innocents* and *The Presentation of Jesus at the Temple* by the Venetian Master Vittore Carpaccio" by Zoja Bajdè, Ermina Frljak Gašparovič, Barbka Gosar Hirci, Sanela Hodžič, Liza Lampič and Andreja Ravnik is a detailed investigation of the original painting technology and the earlier interventions. The authors document the stages of work on the project and discuss the challenges and solutions involved of the latest conservation-restoration intervention.

In "Conservation and restoration of Benedetto Carpaccio's painting *Virgin and Child with Saints*, from Koper Cathedral", Barbka Gosar Hirci and Sanela Hodžič present new insights and procedures that led to the conservation and restoration of Benedetto's painting.

For many years, the Meksika building, a residential block designed by architect Vladimir Šubic and built in 1927 to house municipal employees, was falling into disrepair in the centre of Ljubljana. Following renovation of the building's street and courtyard frontages, which took place from 2013 until 2019, the conservation-restoration intervention on the painting on the vaulted ceiling of the entrance passage began in September 2019. The painting by Rihard Jakopič is the only Impressionist work of its kind in Slovenia that is directly accessible to the public. The article "Conservation--restoration of the painting by Rihard Jakopič on the vaulted ceiling of the entrance passage of the Meksika building" by Tatjana Adamič, Katja Kavkler and Saša Snoj presents the history of the building and the paintings, the scientific investigations of the frescoes, restoration procedures and the results of the intervention.

"Examples of presentations and related issues on the façades of burgher houses" by Maja Avguštin is an in-depth discussion of the heritage of old town centres. The façades of burgher houses are a gallery of styles, trends and craftsmen's skills and are an invaluable source for studying the period in which they were created. How can we protect these heritage from deterioration, which layers should we preserve and how can we ensure their authenticity? Avguštin's article explores the history of heritage conservation approaches and proposes how to address these challenges.

"Post-earthquake reconstruction of the Church of the Nativity of the Blessed Virgin Mary in Police pri Cerknem" by Minka Osojnik and Andrej Jazbec describes the fate of the late Gothic church, which was in poor condition even before the 2004 earthquake. The authors provide an account of the 2018 and 2019 renovations, which involved extensive work on the building; along with structural rehabilitation, protective and conservation-restoration work was carried out. The article also highlights the problems that can occur when structural and conservation-restoration work are carried out simultaneously.

"The role and significance of the International Symposium of Ethnologist Conservators and its contribution to the development of conservation theory and practice" by Dušan Strgar and Dušan Štepec marks the twentieth anniversary of this international symposium. The article provides a chronological overview of the development of the symposium and describes its role, significance, results and contributions to the development of the conservation profession.

The "Presentations" section features an interview with Prof. Ivan Bogovčič by Lucija Stepančič. Bogovčič was a long-time member of the editorial board of the journal and a professor credited with educating generations of restorers – and much more besides that, as we learn in the interview.

The last article in this issue also focuses on ethnology. Dušan Štepec and Saša Roškar present *Poročilo in sprejeti zaključki okrogle mize z naslovom O etnologiji in konservatorstvu ter o njeni vlogi pri varovanju in ohranjanju kulturne dediščine v 21. stoletju – izkušnje, vloga, izzivi* ("Report and the conclusions of the round table on ethnology and conservation and its role in the protection and preservation of cultural heritage in the 21st century – experiences, role, challenges").

We hope you enjoy reading this latest issue of the journal.

Biserka Ribnikar Vasle,
Editor

Polonca Ropret, Tadeja Kosec

Preiskave bronastih arheoloških predmetov, njihova zaščita in hramba

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Ključne besede: bron, TMI, inhibitor korozije, onesnaženje v zaprtih prostorih, ramanska preiskava

Izvleček

Kovinski arheološki predmeti so izredno občutljivi za razne okoljske dejavnike, saj se lahko v neprimernih pogojih hitro razvijejo sekundarni korozijski produkti, ki vplivajo na njihovo obstojnost, zato morata biti njihova hramba in zaščita skrbno načrtovani. V predstavljeni študiji smo preiskali tako bronaste modelne vzorce kot tudi bronaste predmete, ki so bili izkopani na arheološkem najdišču vojašnice na Ptuju. Ugotovili smo prisotnost številnih korozijskih produktov, kot so kuprit, halkocit, malahit in drugi minerali na osnovi karbonata, ki so se na predmetih razvili zaradi vpliva kemijskega okolja v tleh, kjer so ti predmeti ležali stoletja. Izvedli smo karakterizacijo izkopanih bronastih predmetov, poleg tega pa smo novorazviti zaviralec korozije, tolil metil imidazol (TMI), testirali na modelnih vzorcih brona in oksidiranega brona ter preverili njegovo delovanje v onesnaženi atmosferi. Posebno pozornost smo namenili njegovemu obnašanju v zaprtih prostorih, kjer lahko hlapna organska onesnaževala vplivajo na korozijske lastnosti kovinskih artefaktov. Pripravljene vzorce brona in oksidiranega brona smo izpostavili hlapom ocetne kisline in formaldehida. Ramanska analiza je pokazala tvorbo bakrovega acetata in bakrovega nitrata. Po analizi fotografij in po metalografskih študijah smo opazili in ovrednotili nastanek korozije po uporabi inhibitorja korozije TMI. Delovanje TMI smo nato preizkusili tudi na arheološkem rimskem predmetu in ga ovrednotili po izpostavljenosti notranjim onesnaževalom.

Uvod

Baker in njegove zlitine, kot so različne sestave brona, se že od bronaste dobe uporabljajo za izdelavo različnih vrst predmetov ali spomenikov. Glede na izpostavljenost okolju lahko pričakujemo različne vrste propadanja kovine. Če so predmeti izpostavljeni kisiku in vlagi v zraku, pričakujemo prvo stopnjo oksidacije bakra in brona (naravna patinacija). Tvori se bakrov(I) oksid – kuprit rdečkaste barve. Kuprit počasi oksidira do črno obarvanega bakrovega(II) oksida, tenorita. Kadar so bronaste površine izpostavljene na prostem, agresivna onesnaževala v atmosferi reagirajo z vlago v zraku in tvorijo kisli dež. Ko kisli dež omaka patinirane bakrene površine, lahko nastanejo sekundarni korozijski produkti, ki vsebujejo sulfate, nitrate, kloride itd. Posledica tega je sprememba videza bronaste površine in/ali sprememba strukture izpostavljenih zlitin zaradi delovanja kislega dežja (Robbiola idr., 1998). Po drugi strani umetniki pogosto uporabljajo namerno umetniško patiniranje, da bi dosegli vizualne učinke v različnih barvah in efektih globine na površinah. Patine zelenih in rjavih odtenkov na bronastih spomenikih v mestnem okolju so sestavljene iz bakrovega sulfida, kuprita, atakamita, gerharita in ruaita (Ropret in Kosec, 2012). Pokazalo se je, da je umetniško patino mogoče uspešno razlikovati od patine, nastale zaradi atmosferskega vpliva (Kosec idr., 2012).
Pri arheoloških izkopaninah pričakujemo povsem drugačen tip korozijskega napada na baker in bron. Korozija arheoloških kovinskih predmetov je zelo odvisna od kislo-

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dr. Tadeja Kosec, Zavod za gradbeništvo Slovenije, tadeja.kosec@zag.si

sti tal ter od mineralov in organskih snovi v bližnji okolici predmetov. Na bronastih arheoloških artefaktih so na primer lahko identificirani kovinski oksidi, karbonati, sulfati, kloridi in fosfati ter sledi silikatov (Tronner idr., 1995).
Benzotriazol (BTA) se je vrsto let uporabljal in se še uporablja kot zaviralec korozije in UV-stabilizator v restavratorskih lakih, kot je Paraloid B44, za zaščito bakrovih zlitin, zlasti za predmete, ki so izpostavljeni na prostem. BTA pa je v uporabi tudi za zaščito muzejskega gradiva, vendar je zelo strupen in ga je zato treba nadomestiti. Poskusili smo z uporabo drugih okolju prijaznih zaviralcev azolnega tipa, kot sta 2-merkaptobenzimidazol (MBI) (Kosec idr., 2014a, 2014b) in tolil metil imidazol (TMI), katerih delovanje z različnimi patinami so preučevali Muresan idr. (2007) in Kosec idr. (2010). Ramanska analiza je pokazala kemijsko vezavo BTA na baker preko triazolnega obroča za čisti baker in bron (Kosec idr., 2008, Finšgar in Milošev, 2010), medtem ko je bila pri MBI zaznana interakcija zaviralca prek žvepla, substituiranega v obroču imidazola (Kosec idr., 2014a). TMI je bil že uporabljen za zaščito arheoloških patin, njegovo delovanje pa je bilo tudi elektrokemijsko ovrednoteno (Muresan idr., 2007, Kosec idr., 2010). TMI se na bron in oksidirani bron veže preko fizikalne vezi, saj kemijske interakcije TMI nismo dokazali z ramansko spektroskopijo (Ropret in Kosec, 2018). Vendar pa niso bile narejene nobene študije o njegovem vedenju v notranjih prostorih, kjer bi hlapne organske snovi (VOC – volatile organic compounds) lahko igrale pomembno vlogo pri razvoju različnih vrst in obsega korozije. Ti podatki so izrednega pomena za pravilno načrtovanje konservatorskih postopkov in pogojev skladiščenja ter za razstavljanje bakrovih ali bronastih predmetov.
Onesnaženje v zaprtih prostorih že vrsto let vzbuja veliko skrbi za varno vzdrževanje umetniških predmetov. Ohišja ali materiali za pakiranje (les ali izdelki iz lesa, trde plošče, vlaknene plošče srednje gostote, iverne plošče, lepenka, vezane plošče) imajo majhen pretok zraka ter povišane koncentracije organskih kislin. Ker so te snovi pri sobni temperaturi lahko hlapne, najdemo določene koncentracije organskih kislin ali npr. tudi formaldehida v zraku v notranjih prostorih. Za različne materiale in glede na različne okoljske pogoje so bile razvite kompleksne degradacijske funkcije. Vpliv VOC je bil predhodno že raziskan na zgodovinskem papirju (Strlič idr., 2009). Zlasti sinergijski učinek okoljskih dejavnikov (temperatura, relativna vlaga, onesnaževala na prostem in v zaprtih prostorih) pa je v zadnjem času deležen velike pozornosti (Curran idr., 2018, Pastorelli idr., 2014, Portoni idr., 2019, Pastorelli idr., 2019).
Veliko muzejev, še posebej majhnih, nima specializiranega znanstvenega laboratorija, ki bi bil namenjen raziskavam, zato konservatorji niso deležni potrebne razlage in sami težko razberejo pomembne informacije iz zapletenih degradacijskih funkcij. Namen našega dela je bil zato oceniti preprosto metodo vizualnega pregleda, ki bi pomagala pri sprejemanju odločitev za boljšo hrambo bakrenih ali bronastih predmetov ob izpostavljenosti hlapnim organskim spojinam. Poleg tega smo testirali delovanje inhibitorja TMI v simuliranem okolju ocetne kisline in formaldehida, ki sta najpogostejša med VOC, na pripravljenih vzorcih neoksidiranega brona in patiniranega oksidiranega brona (kuprit na oksidiranem bronu). V študiji smo izbrali in analizirali rimske bronaste predmete, ki so bili izkopani leta 2011 na arheološkem najdišču stare vojašnice na Ptuju, učinkovitost zaviralca korozije TMI pa smo preizkusili z izpostavitvijo različnim umetno ustvarjenim razmeram v zaprtih prostorih. Pri raziskavah smo uporabili ramansko spektroskopijo, vizualno in digitalno vrednotenje slik ter metalografsko preiskavo.

Eksperimentalno delo

Vzorci

Bronasti vzorci

Bronaste vzorce Cu10Sn (Goodfellow, UK) s premerom 15 mm in debelino približno 2 mm smo zbrusili z brusnim papirjem gradacije 1000 in jih 3 minute razmaščevali v acetonski ultrazvočni kopeli. Bronaste vzorce smo pripravili z namenom preizkušanja razvoja korozije na bronu ter na oksidiranem bronu. Oksidirani bron smo pripravili na vzorcih brona na površini, ki smo jo segrevali pri 100 °C 2 minuti, dokler se ni pojavila rdečkasta barva, ki predstavlja umetno nastali kuprit (Cu2O). Polovico vsakega vzorca brona smo premazali s 3-odstotno raztopino 4-metil-1-p--tolil imidazola (inhibitorja TMI) v etanolu, ki je znan po zaviralnem delovanju elektrokemijske patine, podobne arheološki patini (Muresan idr., 2007), ter je ekološko in zdravstveno manj oporečen od BTA.

Arheološki vzorci

Obravnavali smo rimske bronaste predmete (slika 1), ki so bili izkopani leta 2011 na arheološkem najdišču stare vojašnice na Ptuju (najdišče 0189/10, bivša vojašnica Ptuj).

Izpostavljenost notranjim onesnaževalom

V prvi eksikator smo za 97 dni (12 tednov) postavili tri vzorce kovine, in sicer: en vzorec brona, en vzorec oksidiranega brona in en arheološki vzorec. Polovica površine vsakega vzorca je bila premazana z alkoholno raztopino z zaviralcem korozije TMI.
Korozivno okolje smo obnavljali tedensko, in sicer smo ustvarili pogoje izpostavljenosti hlapom ocetne kisline, pogoje izpostavljenosti samo formaldehidnim hlapom ter pogoje izpostavljenosti hkratnemu delovanju ocetne kisline in formaldehida. Za ustvarjanje pogojev izpostavljenosti hlapom ocetne kisline smo 2000 µL konc. CH_3COOH dodali v 100 mL nasičene raztopine $MgNO_3$, kot je opisano v referenci (Gibson in Watt, 2010). S tem smo vzpostavili okolje s koncentracijo 150 mg/m^3 ocetne pare. V drugem eksikatorju smo vzpostavili atmosfero formaldehida (100 µL formaldehida na teden oz. 3,1 mg/m^3) in v tretjem kombinirano atmosfero ocetne kisline in formaldehida (2000 µL CH_3COOH v nasičeni raztopini $MgNO_3$ + 1 kapljica formaldehida na teden: 150 mg/m^3 ocetnih par ter 1,5 mg/m^3 formaldehida). Koncentracije onesnaževal so sicer višje, kot bi bile v realnih pogojih, vendar je pri raziskavah vpliva okoljskih dejavnikov velikokrat pomembno, da rezultate dobimo v relativno kratkem časovnem obdobju.

Metode preiskav

Ramanska mikroskopija

Ramanska analiza izpostavljenih bronastih, oksidiranih bronastih in arheoloških vzorcev je bila izvedena z uporabo laserskega vzbujanja 514 nm s spektrometrom Horiba Jobin Yvone LabRAM HR800 Raman, povezanim z optičnim mikroskopom Olympus BXFM. Spektri so bili posneti s × 100 objektivnimi lečami in z uklonsko mrežico s 600 utori/mm s spektralno ločljivostjo ca. 2 cm^{-1} piksel^{-1}. Moč na vzorcih je bila nastavljena na 0,14 mW z uporabo nevtralnih filtrov. Uporabljen je bil CCD detektor z zračnim hlajenjem s časom integracije med 5 in 20 sekund, spektralno območje pa je bilo nastavljeno med 50 in 4000 cm^{-1}. Umerjanje spektrometra je bilo izvedeno s pomočjo silicijevega kristala.

Vizualni pregled (digitalne slike)

Program Matlab smo uporabili za določitev obsega korodirane površine na podlagi programa barvne teže. Vzorce brona iz izpostavljenih atmosfer smo fotografirali z makro objektivom s 1772 × 1181 piksli enkrat na teden. Na koncu so bile makro fotografije izpostavljenih vzorcev brona uvožene v program Matlab, kjer so bile zaznane barve posameznih pikslov v makro fotografiji. Najprej smo odstranili vse ozadje slike, preostala območja pa so bila izpostavljena. Potem so bile izbrane barve, ki predstavljajo korozijske produkte, in število pik. Odstotek korozije na vzorcih brona je bil izračunan iz števila pikslov, ki predstavljajo korozijske produkte, deljeno s številom pikslov, ki predstavljajo izpostavljeno površino.

Metalografske študije

Za proučevanje učinka nastajanja korozijske plasti pri uporabi inhibitorja so bili pripravljeni metalografski preseki na vzorcih brona. Vzorce, ki so bili 95 dni izpostavljeni ocetni parni atmosferi, smo prekrili s cianoakrilatnim lepilom, da se preprečita razlitje patin pri metalografski pripravi vzorcev in zapolnitev večine votlin v sloju patine. Okrogle vzorce smo razrezali in pritrdili v epoksi smolo. Med mokro pripravo metalografskih obrusov se je topni del patine deloma odtopil, vendar to ni vplivalo na oceno debeline nastale patine. Za pregled tako pripravljenih presekov vzorcev smo uporabili optični metalografski mikroskop CARL ZEISS AXIO Imager M2m.

Rezultati in diskusija

Preiskave arheoloških vzorcev

Ramanska analiza na bronastih arheoloških vzorcih je pokazala široko paleto korozijskih produktov, kot so kuprit, halkocit, malahit in drugi minerali na osnovi karbonata (slika 3). Poleg tega smo določili tudi nekatere spojine, kot so hematit, amorfni ogljik in kremen, ki najverjetneje izvirajo iz neposredne okolice najdišča (slika 3).

Bronasti vzorci

Po izpostavitvi vzorca brona v atmosferi ocetne kisline je nastala zelena površina, ki je z ramansko analizo pokazala prisotnost bakrovega(II) acetata monohidrata ($Cu(CH_3COO)_2 \cdot H_2O$) (slika 4). Razvidno je dobro ujemanje ramanskih premikov izpostavljenega vzorca z objavljenimi referenčnimi podatki (Frost in Musumeci, 2007).
Na površini smo poleg bakrovega (II) acetata monohidrata našli tudi bakrov nitrat z intenzivnejšim vrhom pri 1050 cm^{-1}. Enak rezultat smo dobili tudi za oksidirani vzorec brona (spektri niso prikazani).

Slika 5 prikazuje razmerje med odstotkom pokritosti bronastega in odstotkom pokritosti oksidiranega vzorca brona med izpostavitvijo hlapom ocetne kisline (sliki 5a in b). Bron in oksidirani vzorec brona sta že v prvem tednu izpostavitve pokazala 95 % korozijskega razvoja. Oba vzorca sta že po četrtem tednu izpostavljenosti razvila 100-odstotno korodiranost površine. Zdi se, da površina oksidiranega brona ne upočasni procesa tvorbe sekundarnih korozijskih produktov. V prvem tednu izpostavljenosti je zaviralec TMI znatno zmanjšal korozijski razvoj, pri čemer je le 6 % korozijske pokritosti za bron in 5 % za površino oksidiranega brona. Očitno je, da korozija na nezaščiteni površini nastaja veliko hitreje kot na površini, zaščiteni z zaviralcem korozije TMI. Po 12 tednih izpostavljenosti pa je tudi površina, zaščitena z zaviralcem korozije TMI, 100-odstotno pokrita z bakrovim(II) acetatom monohidratom. To močno nakazuje, da bi morali konservatorji v primerih, ko se na bronastih predmetih pojavi zelena korozija, najprej spremeniti okoljske pogoje (ali materiale za shranjevanje), in ne zaščititi predmetov z zaviralcem korozije, saj ta postopek le upočasni in ga ne prepreči. Eventualno bi bila možna uporaba zaviralca korozije BTA, ki pa je zaradi toksičnosti žal odsvetovan oziroma se namesto njega iščejo alternativne rešitve.

V atmosferi formaldehida (sliki 5 c in d) je razvoj korozije precej počasnejši in v 12 tednih je bilo s korozijskimi produkti pokrite le do pribl. 69 % površine na vzorcu brona in 48 % površine na vzorcu oksidiranega brona, medtem ko je v kombinirani atmosferi (ocetna kislina + formaldehid) razvoj korozije hiter, saj so bile že v štirih tednih površine vzorcev brona in oksidiranega brona 100-odstotno pokrite s korozijskimi produkti (sliki 5e in f). V obeh primerih je hitrost korodiranja upočasnjena ob uporabi inhibitorja TMI. V kombinirani atmosferi hitrost razvoja korozije narekuje najbolj korozivna substanca, v tem primeru hlapi ocetne kisline.
Na sliki 6 je prikazan videz površine brona in oksidiranega brona po treh in 11 tednih izpostavitve različnim atmosferam. Z analizo fotoposnetkov smo prišli do rezultatov, prikazanih v sliki 5.

Metalografske študije

Z metalografsko preiskavo smo raziskali preseke vzorcev brona, da bi primerjali debelino nastalih korozijskih produktov. Slika 7 prikazuje debelino nastalih korozijskih produktov po izpostavitvi vzorcev brona (sliki 7a in b) in oksidiranega brona (slika 7c in d) v ocetni atmosferi.
Po 12 tednih izpostavitve vzorcev v ocetni atmosferi je bila debelina korozijskih produktov na bronu in oksidiranem bronu približno 50 µm (sliki 7a in c), medtem ko so se na zaščiteni površini razvili korozijski produkti le v debelini približno 20 µm (slika 7b in d). To ponovno potrjuje že prejšnje ugotovitve, da TMI zavira razvoj korozije na površini vzorcev brona in oksidiranega brona.

Arheološki vzorec

Za preskus v atmosferi ocetne kisline in formaldehida je bil izbran en arheološki vzorec. Slika 8 prikazuje vzorec pred 12-tedensko izpostavljenostjo in po njej.
Vizualni pregled vzorca pokaže intenzivno zelene površine s korozijskimi produkti, ki niso bile zaščitene z zaviralcem TMI, medtem ko je zaščiteni del površine po 12 tednih izpostavljenosti zelo malo korodiral. Znano je, da že korodirana površina (arheološka patina, sestavljena iz kuprita, halkocita in malahita) predmet dodatno ščiti. Intenzivno zelene površine so komaj vidne v primerjavi z bronastimi modeli, pri katerih je po 12 tednih izpostavljenosti korodiralo 100 % površine ne glede na zaščito. Nadaljnja ramanska analiza pa je tudi v tem primeru pokazala prisotnost bakrovega acetata monohidrata in bakrovega nitrata na intenzivno zelenih površinah, in sicer tako na površinah, zaščitenih s TMI, kot na tistih, ki s TMI niso bile zaščitene.

Čeprav je zaščita površine arheološkega vzorca po uporabi zaviralca korozije očitno izboljšana, je očitno, da njegova površina ni popolnoma zaščitena pred vplivom hlapnih organskih spojin, v našem primeru hlapov ocetne kisline ter formaldehida. Poleg tega je intenzivno zelen videz zelo lahko opazen že s prostim očesom, kar omogoča enostavno oceno stanja bronastih predmetov. Pri pojavu zelene korozije priporočamo spremembo oziroma kontrolo okoljskih pogojev za shranjevanje bronastih predmetov namesto dodatne uporabe zaviralcev korozije ali v kombinaciji z njo.

Sklep

Preučevali smo vpliv hlapnih organskih snovi na bronaste predmete in primerjali te predmete s površino vzorcev, ki so bili predhodno zaščiteni z zaviralcem korozije TMI. Z ramansko analizo smo ugotovili, da se na bronu in oksidiranih vzorcih brona tvorita bakrov(II) acetat monohidrat in bakrov nitrat že v prvem tednu izpostavljenosti hlapom ocetne kisline. Po štirih tednih izpostavljenosti se je na nezaščitenih površinah pojavila 100-odstotna korozija, kar smo ocenili z vizualnim pregledom in digitalnimi slikami. Po uporabi TMI smo določili zmanjšanje hitrosti korozije; po 12 tednih izpostavljenosti pa so bile tudi zaščitene površine 100-odstotno pokrite s korozijskimi produkti. Kljub temu lahko rečemo, da smo dokazali razmeroma dobro učinkovitost TMI. V formaldehidni atmosferi korozija ni bila tako agresivna, saj je bilo po 12 tednih s korozijskimi produkti pokrite le 69 % površine brona in 48 % površine oksidiranega brona, medtem ko je imela kombinirana atmosfera ocetne kisline in formaldehida podobno agresiven učinek kot atmosfera ocetne kisline. V obeh atmosferah smo prav tako opazili zmanjšanje hitrosti korozije ob uporabi inhibitorja TMI. Dodatno učinkovitost inhibitorja pa smo pokazali na presekih vzorcev, saj je debelina korozije ob uporabi TMI precej manjša kot pri nezaščiteni površini.
Učinkovitost TMI je bila še izrazitejša na izbranem arheološkem vzorcu, kjer je prisotnost arheološke patine verjetno še dodatno zavrla razvoj korozije.
Čeprav je TMI precej učinkovit pri arheoloških vzorcih brona, pa je še vedno priporočljivo posebno paziti na hlapna organska onesnaževala v depojih ali škatlah, kjer so shranjeni predmeti. Pri koroziji, ki jo je mogoče enostavno vizualno oceniti, kot je razvidno iz te raziskave, je priporočljivo izboljšati ali spremeniti okoljske pogoje v zaprtih prostorih (v depojih, embalaži predmetov iz kartona itd.), da se prepreči nadaljnji razvoj korozije. Eventualno bi bila možna uporaba zaviralca korozije BTA, ki pa je zaradi toksičnosti žal odsvetovan. V prihodnjih študijah bomo primerjali učinkovitost BTA in TMI pri zaščiti pred notranjim organskim onesnaževalom.

Zahvala

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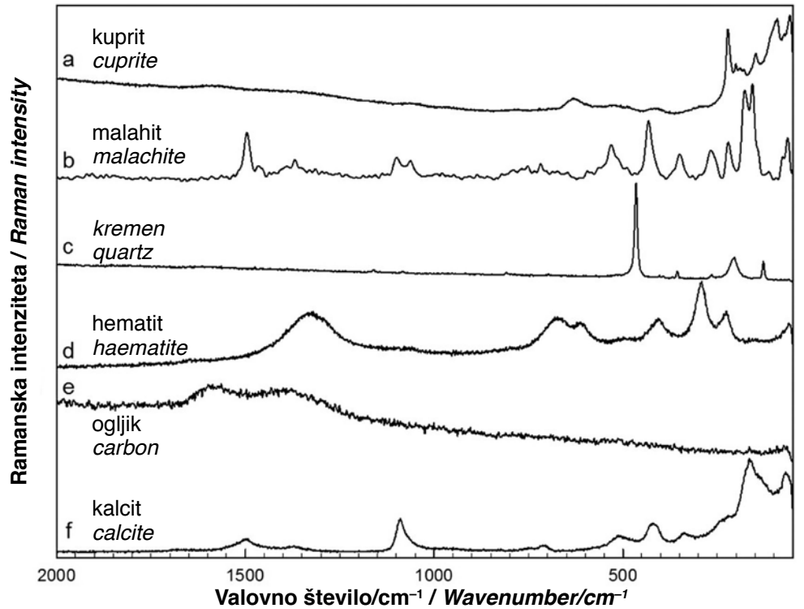
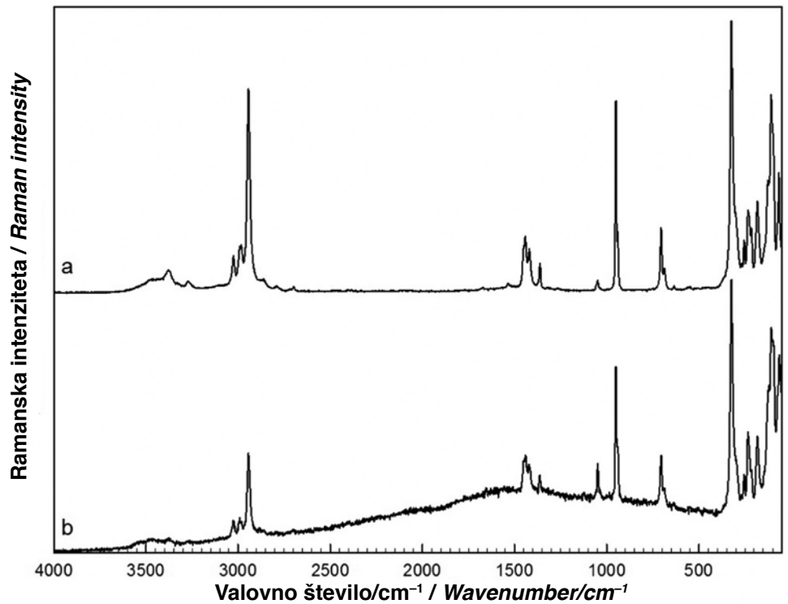
1. Rimski bronasti predmeti, izkopani na arheološkem najdišču stare vojašnice na Ptuju (foto: P. Ropret)
1. Roman bronze artefacts excavated at the former barracks archaeological site in Ptuj (photo: P. Ropret)

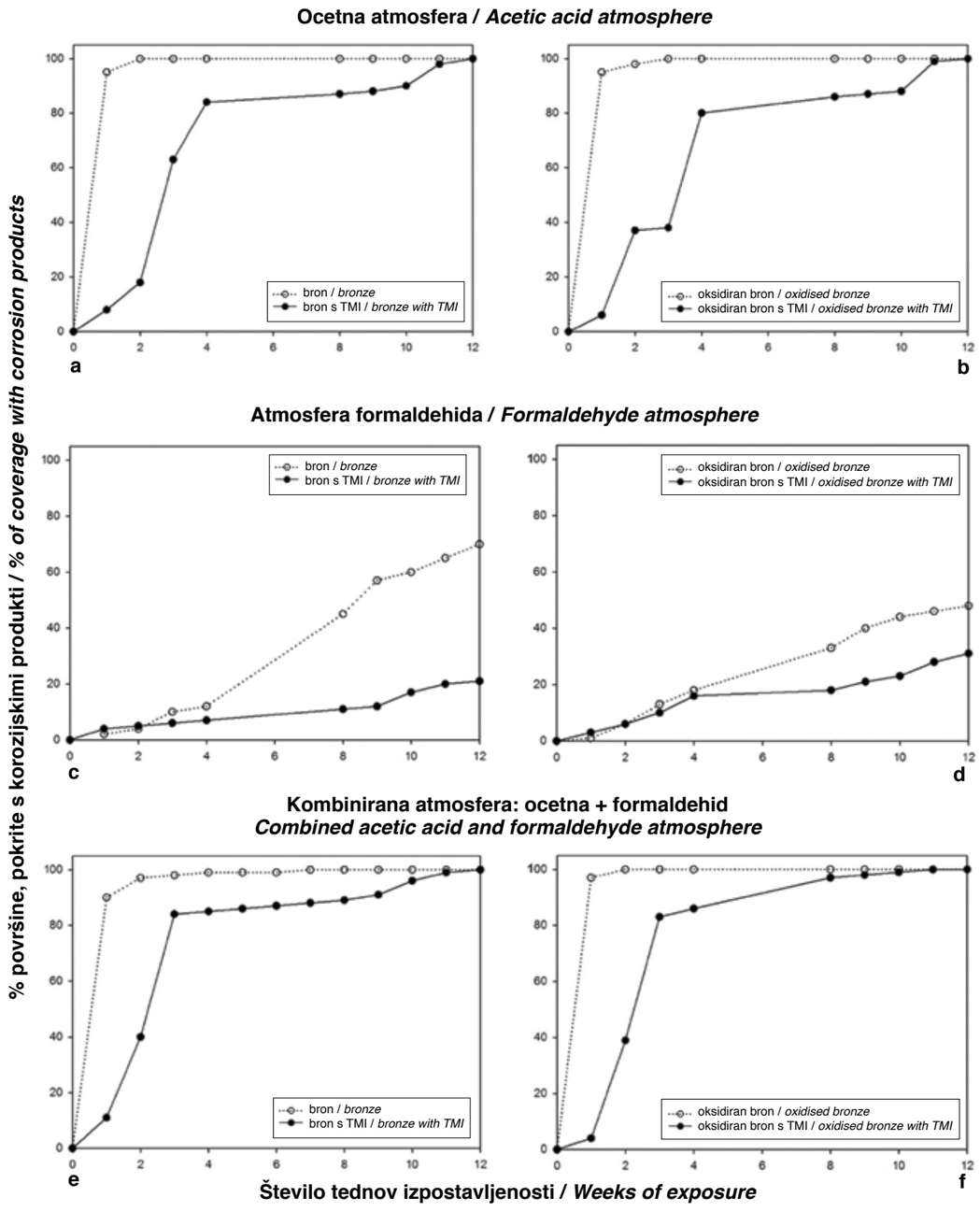
2. Eksikatorji z vzorci brona v različnih testnih okoljih (foto: T. Kosec)
2. Desiccators with bronze samples in different test environments (photo: T. Kosec)



3. Ramanski spektri identificiranih spojin, prisotnih na površini rimskih bronastih predmetov: a) kuprit, b) malahit, c) kremen, d) hematit, e) ogljik, f) kalcit (P. Ropret, T. Kosec)
3. Raman spectra of identified compounds present on the surface of the Roman bronze artefacts: a) cuprite, b) malachite, c) quartz, d) haematite, e) carbon, f) calcite (P. Ropret, T. Kosec)

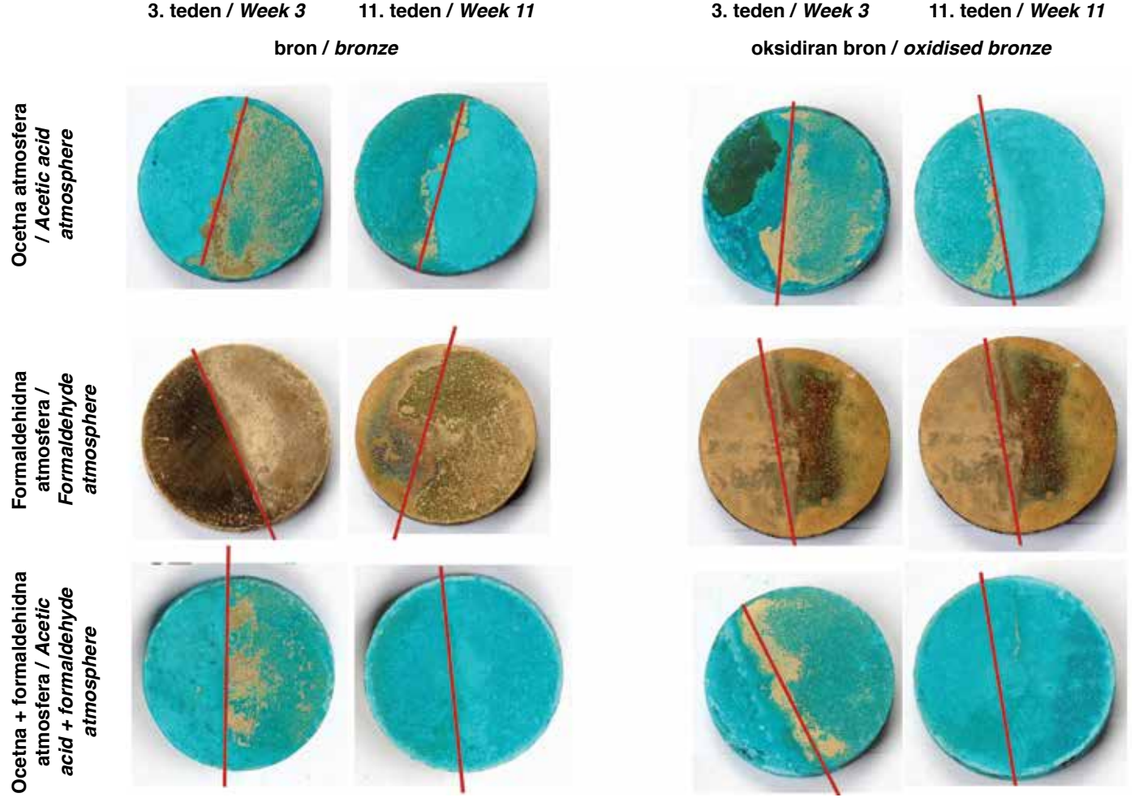


4. Ramanski spekter bakrovega(II) acetata monohidrata, ki je nastal na površini vzorca brona: a) nezaščitena površina, b) površina, zaščitena z inhibitorjem TMI (P. Ropret)
4. Raman spectrum of copper(II) acetate monohydrate formed on the surface of the bronze sample: a) non-protected surface, b) surface protected with the TMI inhibitor (P. Ropret)



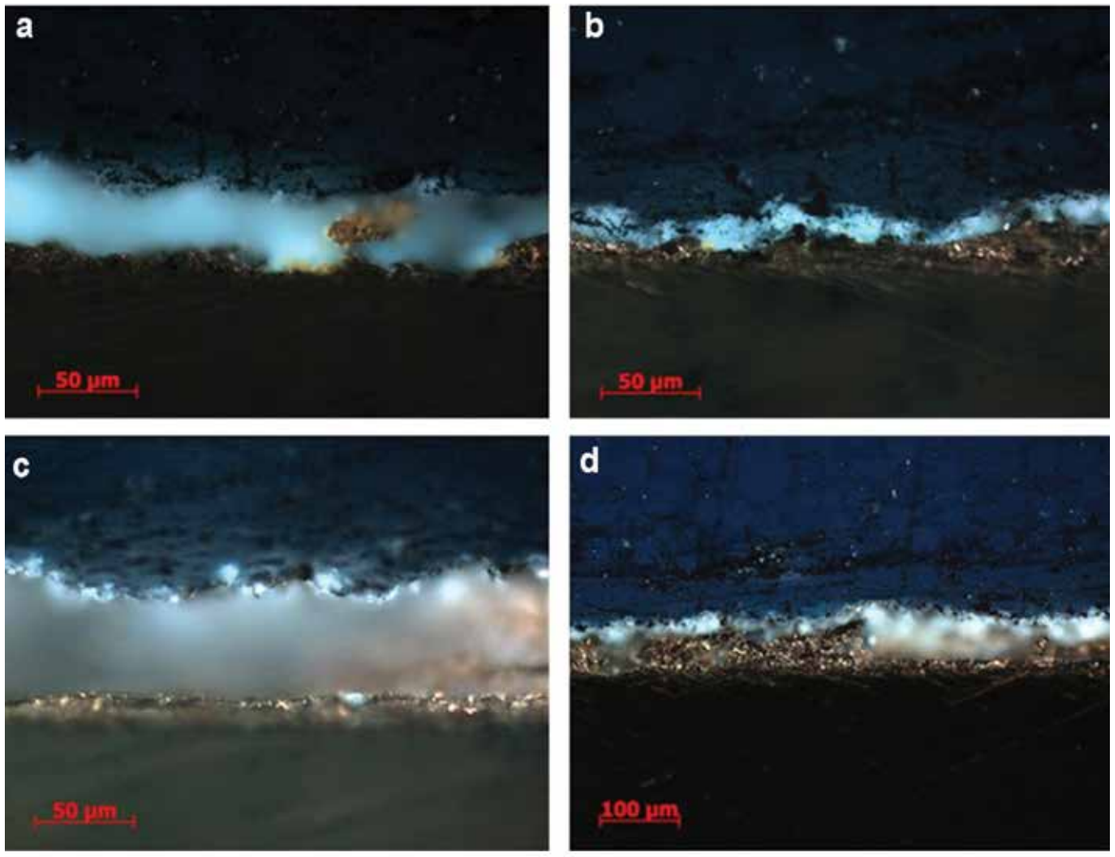
5. Odstotek pokritosti vzorcev glede na tedne izpostavljenosti. Pikčasta črta: čista bronasta površina vzorca. Polna črta: površina brona z nanosom TMI: v atmosferi ocetne kisline a) vzorec brona, b) oksidirani vzorec brona; v formaldehidni atmosferi c) vzorec brona, d) oksidirani vzorec brona; v kombinirani ocetni in formaldehidni atmosferi e) vzorec brona, f) vzorec oksidiranega brona (P. Ropret, T. Kosec)

5. Percentage of coverage in the samples relative to the weeks of exposure. Dotted line: pure bronze surface of the sample. Solid line: surface of bronze coated with TMI: in the acetic acid atmosphere a) bronze sample, b) oxidised bronze sample; in the formaldehyde atmosphere c) bronze sample, d) oxidised bronze sample; in the combined acetic acid and formaldehyde atmosphere, e) bronze sample, f) oxidised bronze sample (P. Ropret, T. Kosec)



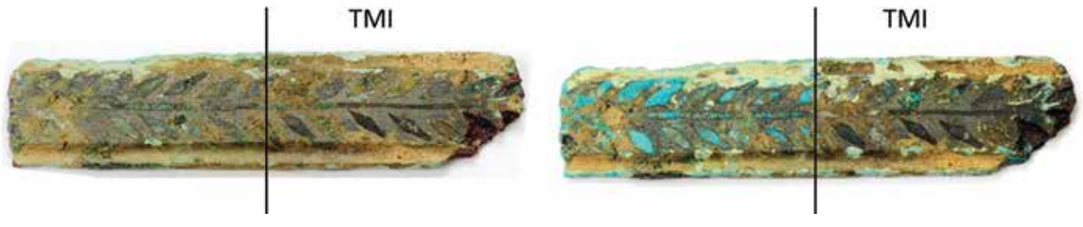
6. Fotografije modelnih vzorcev bronastih ploščic in ploščic oksidiranega brona, izpostavljenih ocetni atmosferi, formaldehidni atmosferi ter kombinirani atmosferi po treh in 11 tednih izpostavitve. Na levi strani črte je nezaščitena površina, na desni strani pa površina, zaščitena z inhibitorjem korozije TMI. (T. Kosec)

6. Bronze and oxidised bronze discs exposed to the acetic acid atmosphere, the formaldehyde atmosphere, and the combined atmosphere after three and 11 weeks of exposure. Surfaces to the left of the red line are not protected, while surfaces to the right of the line are protected with the TMI corrosion inhibitor. (T. Kosec)



7. Debelina preseka vzorca brona po 12 tednih izpostavitve v ocetni atmosferi: a) bron brez zaščite, b) bron z nanosom TMI; debelina preseka vzorca oksidiranega brona po 12 tednih izpostavitve v ocetni atmosferi: c) oksidiran bron brez zaščite, d) bron z nanosom TMI (T. Kosec)

7. Thickness of the bronze sample cross-section after 12 weeks of exposure in the acetic acid atmosphere: a) bronze without protection, b) bronze coated with TMI; thickness of the oxidised bronze sample cross-section after 12 weeks of exposure in the acetic acid atmosphere: c) oxidised bronze without protection, d) bronze coated with TMI (T. Kosec)



8. Izbrani arheološki vzorec, ki naj bi sestavljal del bronastega uhana, TMI nanesen na desno polovico vzorca: a) pred izpostavitvijo; b) po izpostavitvi v atmosferi ocetne kisline in formaldehida (P. Ropret)

8. The selected archaeological sample, which is thought to have been part of a bronze earring. The right half of the sample was coated with TMI: a) before exposure; b) after exposure to the acetic acid and formaldehyde atmosphere (P. Ropret)

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Investigation of bronze archaeological artefacts, their protection and storage

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Abstract

The storage and protection of metallic archaeological artefacts must be carefully planned due to their extreme sensitivity to various environmental factors, as secondary corrosion products can form rapidly under adverse conditions and affect the durability of metallic objects. The present study investigated model samples of bronze as well as bronze artefacts excavated from the archaeological site at the former barracks in Ptuj. We found the presence of a number of corrosion products such as cuprite, chalcocite, malachite and other carbonate-based minerals that have formed on the objects due to the chemical environment in the soil where the objects remained buried for centuries. In addition to the characterisation of the excavated bronze artefacts, we tested a newly developed corrosion inhibitor, tolyl methyl imidazole (TMI), on model samples of bronze and oxidised bronze and verified its performance in a polluted atmosphere. Special attention was given to its performance in indoor conditions where volatile organic pollutants may affect the corrosion properties of metallic artefacts. The prepared model samples of bronze and oxidised bronze were exposed to acetic acid and formaldehyde vapours. Raman analysis has shown the formation of copper acetate and copper nitrate. After photographic analysis and metallographic examination, we observed and evaluated the formation of corrosion following the application of tolyl methyl imidazole. The action of the TMI corrosion inhibitor was then tested on a Roman artefact and evaluated after exposure to indoor pollutants.

Introduction

Copper and its alloys, such as various bronze compositions, have been used to make different types of objects and monuments since the Bronze Age. Depending on the environmental exposure, different types of metal degradation can be expected. When objects are exposed to oxygen and humidity in the air, the first stage of oxidation of copper and bronze (natural patination) occurs, forming the reddish copper(I) oxide cuprite. Cuprite slowly oxidises to a black-coloured copper(II) oxide, tenorite. When bronze surfaces are exposed outdoors, the aggressive pollutants in the atmosphere react with the humidity in the air to form acid rain. When acid rain lands on patinated copper surfaces, secondary corrosion products containing sulphates, nitrates, chlorides, etc. may form. This results in a change in appearance of the bronze surface and/or a change in the structure of the exposed alloys due to the action of acid rain (Robbiola et al., 1998). On the other hand, artists often induce patination deliberately to achieve visual effects in a variety of colours and depth effects on surfaces. Green and brown patinas on bronze monuments in the urban environment consist of copper sulphide, cuprite, atacamite, gerhardite and rouaite (Ropret and Kosec, 2012). It has been shown that artistic patination can be successfully distinguished from atmospheric patination (Kosec et al., 2012).
In the case of archaeological artefacts, the type of corrosion attack on copper and bronze is completely different. Corrosion of metallic archaeological artefacts is highly dependent on soil acidity and the minerals and organic sub-

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stances present in the vicinity of the artefacts. For example, metal oxides, carbonates, sulphates, chlorides, phosphates and traces of silicates can be identified on bronze archaeological artefacts (Tronner et al., 1995).

Benzotriazole (BTA) has been used for many years and is still used as a corrosion inhibitor and UV stabiliser in restoration varnishes, such as Paraloid B44, intended for the protection of copper alloys, especially for outdoor objects. BTA is also used to protect museum material. However, it is highly toxic and therefore needs to be substituted. We have tested other environmentally friendly azole type inhibitors, such as 2-mercaptobenzimidazole (MBI) (Kosec et al., 2014a, 2014b) and tolyl methyl imidazole (TMI), the interaction of which with different patinas has been studied by Muresan et al. (2007) and Kosec et al. (2010). Raman analysis showed chemical bonding of BTA to Cu through a triazole ring in pure copper and bronze (Kosec et al., 2008, Finšgar and Milošev, 2010), while in the case of MBI, an inhibitor interaction was detected through S, substituted in the imidazole ring (Kosec et al. etc. 2014a). Tolyl methyl imidazole (TMI) has already been used to protect archaeological patinas, and its action has been electrochemically evaluated (Muresan et al., 2007; Kosec et al., 2010). TMI bonds to bronze and oxidised bronze through a physical bond, as Raman spectroscopy did not detect any chemical interaction of TMI (Ropret and Kosec, 2018). However, no studies have been conducted on its behaviour indoors, where volatile organic compounds (VOCs) may significantly affect the formation of different types of corrosion and their extent. This data is extremely important for the proper planning of conservation treatments, storage conditions, and the dismantling of copper or bronze objects.

Indoor pollution has for several years been a matter of great concern for the safe maintenance of art objects. Storage enclosures or packaging materials (wood or wood products, hardboard, medium-density fibreboard, chipboard, cardboard, plywood) have a low air exchange rate and high concentrations of organic acids. Since these substances may be volatile at room temperature, concentrations of organic acids and compounds such as formaldehyde can be found in indoor air. Complex degradation functions have been developed for different materials and with respect to different environmental conditions. The impact of VOCs has previously been investigated in a study of historic paper (Strlič et al., 2009). In particular, the synergistic effect of environmental factors (temperature, relative humidity, outdoor and indoor pollutants) has received much attention recently (Curran et al., 2018, Pastorelli et al., 2014, Portoni et al., 2019, Pastorelli et al., 2019).

Many museums, especially smaller ones, do not have a specialised research laboratory, so conservators are not provided with the necessary explanations and find it difficult to interpret important information from complex degradation functions on their own. The aim of this work was therefore to evaluate a simple method of visual inspection that would help in making decisions for improving the storage of copper or bronze objects exposed to volatile organic compounds. In addition, we tested the action of the TMI inhibitor in a simulated environment of acetic acid and formaldehyde, two of the most common VOCs, on prepared samples of non-oxidised bronze and patinated oxidised bronze (cuprite on oxidised bronze). In the case study, we selected and analysed Roman bronze artefacts excavated in 2011 at the former barracks archaeological site in Ptuj, and tested the effectiveness of the TMI corrosion inhibitor by exposing it to various artificially created indoor conditions. The study utilised Raman spectroscopy, visual and digital evaluation of images, and metallographic examination.

Experimental work

Samples

Bronze samples

Bronze samples – Cu10Sn (Goodfellow, UK) – with a diameter of 15 mm and a thickness of approximately 2 mm were ground with 1000 grit emery paper and degreased in an acetone ultrasonic bath for 3 min. The bronze samples were prepared in order to test for corrosion on bronze and oxidised bronze. Oxidised bronze was prepared by placing bronze samples on a heated surface at 100 °C for 2 minutes until a reddish colour indicating artificial cuprite (Cu2O) appeared. One half of each bronze sample was coated with a 3% solution of 4-methyl-1-p-tolyl imidazole (TMI inhibitor) in ethanol, known for its ability to inhibit an electrochemical patina that is similar to an archaeological patina (Muresan et al., 2007), and is less damaging to the environment and health than BTA.

Archaeological samples

We analysed Roman bronze artefacts (Figure 1) which were excavated in 2011 at the former barracks archaeological site in Ptuj (site 0189/10, the former Ptuj barracks).

Exposure to indoor pollutants

Three metal samples were placed in the first desiccator for a period of 97 days (12 weeks), specifically: 1 sample of bronze, 1 sample of oxidised bronze, and 1 archaeological sample. One half of the surface of each sample was coated with an alcohol solution of the TMI corrosion inhibitor.

During the test, the corrosive environment was maintained weekly by creating conditions of exposure to acetic acid vapour, to formaldehyde vapour alone, and to the combined action of acetic acid and formaldehyde. Conditions of exposure to acetic acid vapour were created by adding 2000 µL of conc. CH_3COOH to 100 mL of saturated $MgNO_3$ solution, as described in reference (Gibson and Watt, 2010). In this way an environment with a concentration of 150 mg/m^3 of acetic vapour was established. In the second desiccator we established a formaldehyde atmosphere (100 µL formaldehyde per week or 3.1 mg/m^3), while the third desiccator had a combined acetic acid and formaldehyde atmosphere (2000 µL of CH_3COOH in a saturated $MgNO_3$solution + 1 drop of formaldehyde per week: 150 mg/m^3 of acetic vapour and 1.5 mg/m^3 of formaldehyde). While the concentrations of pollutants were higher than those in real-world conditions, obtaining results in a relatively short period of time is often important when conducting research on the impact of environmental factors.

Investigation methods

Raman analysis

Raman analysis of exposed bronze, oxidised bronze and archaeological samples was performed using a 514 nm laser excitation line with a Horiba Jobin Yvone LabRAM HR800 Raman spectrometer coupled to an Olympus BXFM optical microscope. The spectra were recorded using × 100 objective lenses and a diffraction grating of 600 grooves/mm, which gave a spectral resolution of approx. 2 cm^{-1} pixel^{-1}. The power at the samples was set to 0.14 mW using neutral density filters. An air-cooled CCD detector with integration times between 5 and 20 seconds was used, and the spectral range was set between 50 and 4000 cm^{-1}. The spectrometer was calibrated using a silicon crystal.

Visual examination (digital images)

Matlab was used to determine the extent of surface corrosion based on the colour weight programme. The bronze samples exposed to the different atmospheres were photographed weekly using a macro lens with a resolution of 1772 × 1181 pixels. The macro photographs of the exposed bronze samples were then imported into Matlab, where the colours of individual pixels in the images were detected. First, the image background was removed leaving the exposed areas. The colours representing corrosion products were then selected and the number of pixels was determined. The percentage of corrosion on the bronze samples was calculated by dividing the number of pixels representing corrosion products with the number of pixels representing the exposed areas.

Metallographic examination

Metallographic cross sections of bronze samples were prepared in order to study the effect of the inhibitor on the formation of the corrosion layer. Samples that were exposed to an acetic vapour atmosphere for 95 days were coated with cyanoacrylate adhesive to prevent the removal of patina during metallographic sample preparation and the filling-in of cavities in the patina layer. Round samples were cut and fixed in epoxy resin. While the soluble parts of the patina were partially dissolved during the wet grinding of metallographic specimens, this did not affect the estimate of the thickness of the formed patina layer. The sample cross sections thus obtained were examined using a CARL ZEISS AXIO Imager M2m optical metallographic microscope.

Results and Discussion

Investigation of archaeological samples

Raman analysis of bronze archaeological samples showed a wide range of corrosion products such as cuprite, chalcocite, malachite and other carbonate-based minerals (Figure 3). In addition, we identified compounds such as hematite, amorphous carbon and quartz, which most likely originate from the immediate vicinity of the site (Figure 3).

Bronze samples

The bronze samples exposed to the acetic acid atmosphere became covered with a green surface in which the presence of copper(II) acetate monohydrate ($Cu(CH_3COO)_2{\cdot}H_2O$) was shown by Raman analysis (Figure 4). A good correspondence between the Raman modes of the exposed sample and the published reference data was evident (Frost and Musumeci, 2007).

In addition to the presence of copper(II) acetate monohydrate on the surface, we also found copper nitrate with a pronounced peak at 1050 cm^{-1}. The same result was also obtained for the oxidised bronze sample (spectra are not shown).

Figure 5 shows a comparison between the percentage of coverage in the bronze and oxidised bronze samples during exposure to acetic acid vapour (Figures 5a and 5b). In the first week of exposure, bronze and oxidised bronze samples already showed 95% corrosion development. By the fourth week of exposure, both samples developed a 100% corroded surface. It appears that the surface of oxidised bronze did not slow down the formation of secondary corrosion products. In the first week of exposure, the TMI inhibitor significantly reduced corrosion development, with only 6% corrosion coverage for bronze and 5% for the oxidised bronze surface. It is thus evident that the formation of corrosion on a non-protected surface takes place much faster than on a surface protected by the TMI corrosion inhibitor. However, after 12 weeks of exposure the surface protected by the TMI corrosion inhibitor was also 100% covered with copper(II) acetate monohydrate. This strongly suggests that in cases where green corrosion occurs on bronze objects, conservators should first change the environmental conditions (or storage materials), rather than protect objects with

a corrosion inhibitor that will slow down the process but not prevent it. While the BTA corrosion inhibitor is effective, its use is discouraged due to its toxicity while alternative solutions are being sought.
In the formaldehyde atmosphere (Figures 5c and 5d), the development of corrosion was much slower, reaching only about 69% of the bronze sample surface and 48% of the oxidised bronze sample surface after 12 weeks. On the other hand, the development of corrosion in the combined atmosphere (acetic + formaldehyde) was again rapid, with both bronze and oxidised bronze samples 100% covered with corrosion products within four weeks (Figures 5e and 5f). In both cases, the rate of corrosion formation was slowed by the use of the TMI inhibitor. In the combined atmosphere, the corrosion rate was dictated by the more corrosive substance, in this case acetic acid vapour.
Figure 6 shows the surface of the bronze and oxidised bronze samples after three and 11 weeks of exposure to different atmospheres. The results shown in Figure 5 were obtained based on the analysis of photographs.

Metallographic examination

A metallographic examination of the cross-sections of bronze samples was carried out in order to compare the thickness of the formed corrosion products. Figure 7 shows the thickness of formed corrosion products in bronze (Figures 7a and 7b) and oxidised bronze samples (Figures 7c and 7d) after exposure in the acetic atmosphere.
After 12 weeks of exposure in the acetic atmosphere, corrosion products on the bronze and oxidised bronze samples reached a thickness of about 50 µm (Fig. 7a and 7c), while the corrosion products on the protected surface had a thickness of only about 20 µm (Fig. 7b and 7d). This confirms previous findings that TMI inhibits the development of corrosion on the surface of bronze and oxidised bronze samples.

Archaeological sample

One archaeological sample was selected for testing in the atmosphere of acetic acid and formaldehyde. Figure 8 shows the sample before and after 12 weeks of exposure.
Visual examination of the sample shows intense green areas and corrosion products on surfaces that were not protected with the TMI inhibitor, while the protected part of the surface shows very little corrosion after 12 weeks of exposure. It is known that an already corroded surface (an archaeological patina composed of cuprite, chalcocite and malachite) offers additional protection to an object. The intense green areas are barely visible compared to the bronze models, where 100% of the surface has corroded after 12 weeks of exposure, regardless of the protection. As in the previous cases, further Raman analysis showed the presence of copper acetate monohydrate and copper nitrate in the intense green areas in both TMI protected and non-protected surfaces.
Although the surface of the archaeological sample is clearly better protected after the application of the corrosion inhibitor, it can be seen that the surface is not completely protected from volatile organic compounds, in this case acetic acid and formaldehyde vapours. Furthermore, the intense green appearance is noticeable to the naked eye, which enables an easy evaluation of the condition of bronze objects. In the case of occurrence of green corrosion it is therefore recommended to modify or control the environmental conditions for storing bronze objects in addition to using corrosion inhibitors.

Conclusions

We studied the effect of volatile organic compounds on bronze objects, comparing them with samples that were previously protected with the corrosion inhibitor tolyl methyl imidazole (TMI). Raman analysis showed that copper(II) acetate monohydrate and copper nitrate formed on bronze and oxidized bronze samples as early as during the first week of exposure to acetic acid vapour. After four weeks of exposure, 100% corrosion was evident on non-protected surfaces, which was assessed by visual examination and evaluation of digital images. Following the application of TMI, a reduction in the corrosion rate was determined. However, the protected surfaces were also 100% covered with corrosion products after 12 weeks of exposure. Nevertheless, the TMI inhibitor proved to be relatively effective. In the formaldehyde atmosphere, corrosion was less aggressive as it reached only 69% of the bronze sample surface and 48% of the oxidised bronze sample surface after 12 weeks. The combined acetic acid and formaldehyde atmosphere, however, had an aggressive effect similar to that of the acetic acid atmosphere. In both atmospheres, a decrease in the corrosion rate was also observed after the application of the TMI inhibitor. The cross sections of samples showed the additional effectiveness of the inhibitor, as the corrosion layer on surfaces protected with TMI was much thinner than on unprotected ones.
The effectiveness of TMI was even more pronounced in the selected archaeological sample, where the presence of archaeological patina likely further inhibited the development of corrosion.
While TMI is relatively effective when applied to archaeological bronze samples, it is still recommended to pay particular attention to volatile organic pollutants in storage rooms or boxes. In cases of corrosion that can be easily evaluated visually, as shown in this study, it is advisable to improve or modify the indoor environmental conditions (in storage rooms, cardboard packaging, etc.) to prevent the further development of corrosion. While the BTA corrosion inhibitor may be an effective solution, its use is discouraged due to its toxicity. Our future research will compare the effectiveness of BTA and TMI in protecting against indoor organic pollutants.

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Konservatorsko-restavratorski posegi na slikah *Pokol nedolžnih otrok* in *Predstavitev v templju* beneškega mojstra Vittoreja Carpaccia

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Izvleček

V letih 2015–2018 je prišlo v okviru projekta Carpaccio do sodelovanja različnih strok, ki omogočajo boljše razumevanje in ohranjanje kulturne dediščine. Raziskovanje avtorjeve tehnologije, prepoznavanje preteklih konservatorsko-restavratorskih posegov, stanje in okolje hranjenja so bili temelji za načrtovanje in uspešno reševanje slik *Pokol nedolžnih otrok* in *Predstavitev v templju* iz cerkve Marijinega vnebovzetja v Kopru, ki ju je beneški mojster renesančnega slikarstva Vittore Carpaccio ustvaril leta 1523.

Povzetek

Pomemben del večletnega konservatorsko-restavratorskega projekta Carpaccio predstavljata sliki *Pokol nedolžnih otrok* in *Predstavitev v templju* iz cerkve Marijinega vnebovzetja v Kopru, ki ju je beneški mojster renesančnega slikarstva Vittore Carpaccio ustvaril leta 1523 in sta ob nastanku krasili vrata monumentalne orgelske omare. Zaradi visoke nacionalne vrednosti je projekt od leta 2015 vključen v redne programe Restavratorskega centra Zavoda za varstvo kulturne dediščine, podpira pa ga Ministrstvo za kulturo Republike Slovenije. Natančen popis stanja slik, razumevanje avtorjeve tehnologije in analiza starih konservatorsko-restavratorskih posegov so bili začetek zahtevnega projekta, v katerega je bila vključena tudi mednarodna ekipa strokovnjakov, ki ji je v sodelovanju s slovenskimi uspelo določiti večino materialov. Z naravoslovnimi preiskavami, ki so potekale v različnih časovnih okvirih, so določili lake, pigmente, veziva in polnila. Podatki, ki smo jih pridobili s pregledom ohranjene dokumentacije, razumevanje stanja slik, prepoznavanje starih posegov, izvedene naravoslovne preiskave in upoštevanje pogojev hranjena so bili osnova za pripravo zahtevnega konservatorsko-restavratorskega programa del, ki so se zaključila v letu 2018 z montažo slik v koprsko stolnico, v prostor, ki je z njimi prežet, saj so v njem že pol tisočletja.

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Uvod

V konservatorsko-restavratorski projekt Carpaccio sta bili najprej vključeni sliki *Pokol nedolžnih otrok* (v nadaljevanju *Pokol*) in *Predstavitev v templju* (v nadaljevanju *Predstavitev*), pozneje pa še *Marija s svetnikoma* Benedetta Carpaccia ter najbolj reprezentativna med njimi, Vittorejeva slika *Marija na prestolu z detetom in šestimi svetniki*[1]
Od prvotno štirih orgelskih slik sta se do danes v stolnici ohranili le dve, obe z upodobitvami prizorov iz Jezusovega zgodnjega otroštva. Na sliki *Predstavitev* je moč razbrati letnico 1523, kar sliki uvršča v Carpaccievo pozno obdobje ustvarjanja in sta pravzaprav njegovi zadnji znani deli. Ker gre za nacionalno pomembno likovno dediščino, je bil projekt leta 2015 vključen v redne programe Restavratorskega centra Zavoda za varstvo kulturne dediščine, finančno pa ga je podprlo Ministrstvo za kulturo Republike Slovenije.[2]
Natančen popis stanja slik *Pokol* in *Predstavitev*, razumevanje avtorjeve tehnologije in prepoznavanje starih konservatorsko-restavratorskih posegov so bili začetna stopnja obsežnega in kompleksnega projekta, v katerega je bila vključena tudi mednarodna ekipa strokovnjakov[3] s katero nam je uspelo določiti večino materialnih komponent. Raziskovalni del projekta je bil leta 2010 odobren na mednarodnem razpisu mobilnega laboratorija MOLAB v okviru evropskega projekta CHARISMA in ga je financirala Evropska komisija. Z naravoslovnimi preiskavami smo identificirali lake, pigmente, veziva in polnila. Pridobili smo tudi pomembne informacije za izbor materialov ter testiranje odstranjevanja površinske nečistoče, voščenega premaza in neoriginalnih lakov. Z analizo rezultatov smo določili najustreznejšo metodologijo, vendar se je med samo izvedbo pokazala potreba po njeni nadgradnji. Neinvazivne preiskave so bile pomembne, vendar smo za večji obseg podatkov potrebovali tudi rezultate invazivne stratigrafije. Z optično mikroskopijo, Ramanovo mikrospektroskopijo, infrardečo spektroskopijo s Fourierevo tranformacijo, rentgensko radiografijo in multispektralno analizo je slovenska ekipa strokovnjakov[4] kakovostno dopolnila in nadgradila podatke o materialni sestavi Vittorejevih slik (sliki 1 in 2). Sliki *Pokol* in *Predstavitev* sta bili v preteklosti deležni več obnov, o čemer pričajo ohranjene fotografije iz leta 1906, medtem ko so iz leta 1958, 1959 in 1961 ohranjeni tudi zapisniki o posvetovanju strokovne komisije, v katerih so zabeleženi sklepi pred posegi in doseženi rezultati po njih.[5] Rezultati naravoslovnih preiskav, stanje umetnin in okolje hrambe so bili glavno vodilo za razmislek, pripravo in izvedbo kompleksnega konservatorsko-restavratorskega programa, ki je natančneje opisan v nadaljevanju.[6]

Konservatorsko-restavratorski posegi v letih 1958–1961

Sliki sta bili v preteklosti konservirani in restavrirani vsaj dvakrat (Sitar, 2015: 30). Na fotografiji iz leta 1906 je razvidno, da sta bili dve motivno popolnoma neskladni umetnini združeni v eno in opremljeni z okrasnim okvirjem.[7] Pri pregledu stanja slik in analizi fotografskega gradiva iz leta 1958 (slika 3) smo ugotovili, da je bila slika *Predstavitev* prilepljena na sliko *Pokol* (slika 4). Združeni sliki sta bili najverjetneje tudi podlepljeni na dodatno platno, saj je bil to uveljavljen postopek za ohranjanje preperelih ali poškodovanih tkanin nosilcev že od 17. stoletja dalje (Kirsh, Levenson, 2000: 35). Izvajalci in čas konservatorsko-restavratorskega posega niso znani, morda obstajajo zapisi o tem v italijanskih arhivih, ki pa so žal težko dostopni.
Zadnje konservatorsko-restavratorske postopke smo lahko rekonstruirali na podlagi komisijskih zapisnikov, ki so nastali med letoma 1958 in 1961, ko je restavratorski oddelek Zavoda za spomeniško varstvo tedaj Ljudske republike Slovenije izvedel posege v skladu z določitvami strokovne komisije.[8] Ohranjeni so trije zapisniki s posvetovanj komisije, v katerih so zabeleženi sklepi, sprejeti pred konservatorsko-restavratorskimi posegi, in doseženi rezultati po njihovi realizaciji. Zapisi obravnavajo več slik: *Pokol nedolžnih otrok*, *Predstavitev v templju*, *Madona na prestolu z detetom in šestimi svetniki* avtorja Vittoreja Carpaccia, *Madona na prestolu z detetom in dvema svetnikoma* avtorja Benedetta Carpaccia ter sliko beneške šole neznanega avtorja z naslovom *Zadnja večerja*. V zapisniku z dne 11. 2. 1958 je navedeno, naj se na vseh slikah izvede vsa potrebna dokumentacija: fotografiranje z navadno in infrardečo svetlobo, ultravijolično fluo-

1 Izvedba konservatorsko-restavratorskih posegov na projektu Carpaccio: Zoja Bajdè, Emina Frljak Gašparovič, Barbka Gosar Hirci, Sanela Hodžić, Liza Lampič in Andreja Ravnikar.
2 Jernej Hudolin, vodja Restavratorskega centra, ZVKDS, in odgovorna konservatorja iz OE Piran, ZVKDS: Jure Bernik in Mojca Marjana Kovač.
3 Sodelujoči v raziskovalnem projektu MOLAB: iz Raziskovalnega inštituta, ZVKDS, CK: Polonca Ropret; iz univerze v Perugii in inštituta SMAArt: Constanza Miliani, Francesca Rosi, Paola Rocchi, Chiara Anselmi, Chiara Grazia in Anna Amat; iz CNR-INO Istituto Nazionale di Ottica Art Diagnostic Group iz Firenc: Claudia Daffara in Marco Barucci; iz Centre de Recherche et des Restauration des Musées de France, Paris du Louvre: Jacques Casting, Helene Rousseliere in Alessandra Gianoncelli.
4 Iz Naravoslovnega oddelka ZVKDS, RC: Katja Kavkler, Petra Bešlagić, Sonja Fister; iz Raziskovalnega inštituta, ZVKDS, CK: Lea Legan, Klara Retko in Maša Kavčič; iz Narodne galerije: Andrej Hirci.
5 Arhivsko gradivo je našla Mateja Neža Sitar, ZVKDS, RC.
6 Konservatorsko-restavratorske posege je spremljala strokovna komisija v sestavi: Višnja Bralić, Hrvaški restavratorski zavod; Luca Caburlotto, Polo Museale del Friuli Venezia Giulia; Jurij Dobravec, Ars Organi Sloveniae; Edvilijo Gardina, Pokrajinski muzej Koper; Mira Ličen Krmpotić, samostojna kulturna delavka; Ferdinand Šerbelj in Simona Škorja, Narodna galerija.
7 Vir: Fondazione Federico Zeri.
8 Komisijo so sestavljali: Izidor Cankar, Boris Fakin, Božidar Jakac, Gojmir Anton Kos, France Mihelič, Miha Pirnat st., France Stele, Mirko Šubic, Marijan Zadnikar in Miha Železnik.

rescenco, rentgen in kemijske analize. Komisija je določila, naj program konserviranja slik pripravita predsednik komisije in takratni vodja restavratorskega oddelka prof. Mirko Šubic in inž. Boris Fakin, preden se ponovno zberejo in določijo še obseg restavriranja. Najpomembnejša je bila odločitev, da sliki ločijo. Zapisnik z datumom 27. 3. 1959 ponovno omenja ločitev slik, ohranitev vseh lakov, konservacijo, podlepljanje, kitanje, retuširanje in novo lakiranje. Predsedniku komisije je bila prepuščena odločitev o velikosti novih podokvirjev. V zapisniku po posegih z dne 21. 1. 1961 komisija ugotavlja, da sta bili sliki *Pokol* in *Predstavitev* konservirani in restavrirani v skladu s programom in da so doseženi rezultati ustrezni. Predstavljena je bila tudi ideja o novih temnih okrasnih okvirjih z zlatim vložkom, ki pa ni bila realizirana, omenja pa se tudi možnost nove lokacije za prestavitev slik v koprski stolnici.

Poleg skopih komisijskih zapisov so nam bili v veliko pomoč tudi zapisi o metodologiji konserviranja in restavriranja slik na platnu, ki jih je v času svojega delovanja skrbno beležil naš kolega Miha Pirnat st.[9] Zaradi njih smo lažje rekonstruirali stare konservatorsko-restavratorske posege, ki so jih izvajali na obravnavanih delih. Sliki so ločili in ju predstavili kot samostojni slikarski deli v velikosti 421 × 147 cm. Podlepili so ju ročno z voščeno-smolno maso (Kavkler, 2016: 5), ki je bila v tistem času novost v Sloveniji.[10] Zaradi podobnih klimatskih razmer v Sloveniji kot v severozahodni Evropi so naši restavratorji zaupali kolegom v Belgiji, ki so voščeno-smolno maso že uporabljali za konserviranje in restavriranje dragocenih holandskih slik (Demšar, 1972: 39). Za podlepljanje so uporabili platno industrijske izdelave širine 140 cm, ki so ga za sliko *Pokol* sešili iz dveh kosov, za sliko *Predstavitev* pa iz štirih. Velikost podlepljenega platna na sliki *Predstavitev* je bila 433 × 160–163 cm, na sliki *Pokol* pa 425 × 153 cm. Na dveh mestih so poslikani rob slike *Predstavitev* in zaščitno masko dodatno prišili na podlepljeno tkanino. Iz ostankov tršega premaza, ki smo ga našli med posegi, sklepamo, da so hrbtišča obeh slik pred podlepljanjem tudi impregnirali.[11] Pri odstranjevanju podlepljenih platnen (slika 5) smo ugotovili, da so porezane šive originalnih nosilcev prelepili z dvema slojema t. i. japonskega papirja.[12] Na podoben način so utrdili tudi poškodovane robove in raztrganini v spodnjem delu slike *Predstavitev*. Dve večji luknji v originalnem nosilcu slike *Pokol* so zapolnili s platnenimi vstavki, ju zakitali in večje območje okoli poškodb preslikali.

Zaradi pomanjkljive ohranjene dokumentacije je nemogoče vedeti, kaj vse se je s slikami dogajalo v času od rušenja orgel pa do združitve v eno umetnino. Dejstvo je, da so podatki o merah originalnih formatov za vedno zgubljeni. Tega so se zavedali tudi naši predhodniki, zato so poskušali različna formata slik poenotiti z enakimi merami novih podokvirjev. Zaradi prezentacije polovično, polkrožno zaključenih originalnih platen na pravokotnih formatih, pa tudi zaradi nepravilnih robov, ki so posledica obrezovanja slik v preteklosti, so posamezni deli sekundarnega nosilca ostali izpostavljeni. Ta območja so prelepili in zaščitili s t. i. dekorativno masko, ki so jo izdelali iz več kosov platna in pobarvali z nevtralno sivo barvo.

Stanje slik

Stanje nosilcev in podokvirjev

Zaradi močne ladjedelniške industrije in pomorskih interesov Beneške republike so bile tkanine v času renesanse zlahka dostopne (Matthew, 2002: 685). Carpaccio je za svoja slikarska dela poleg tkanin v osnovni platno vezavi uporabljal tudi tkanine v keper vezavi in njegovo izpeljavo z lomljenim rebrenjem, imenovanim tudi ribja kost. Izmed vseh treh je tkanina platno vezave najmočnejša in dovolj toga, enakomerne strukture ter dimenzijsko stabilna (Bajdè, 2016: 197), zato je najboljša izbira za tkan slikarski nosilec.

Za izdelavo obeh slik je Carpaccio uporabil laneno tkanino (Kavkler, 2019: 7–8) v platno vezavi s povprečno gostoto niti po osnovi in votku 13/11 na cm^{-1}. Ročno predeni preji osnove in votka sta enojni in desno viti. Lokalno sta močno zadebeljeni, kar se odraža na močno strukturirani površini obeh slik (slika 6).

Originalni nosilec slike *Predstavitev* meri 423 × 128 cm, *Pokola* pa 418 × 146 cm. Ker gre za umetnini velikega formata, sta nosilca v celoto sestavljena iz več kosov istovrstne tkanine, ki je široka 80 cm in je primerljiva z ohranjenimi slikarskimi nosilci iz časa Beneške republike (Yang, 1998: 179). Nosilec slike *Predstavitev* je sestavljen iz šestih kosov, *Pokol* pa iz sedmih (slika 7). Šivanje tkanin je v tistem času lahko ponudil sam dobavitelj (Dunkerton, Spring, 2013: 10) ali pa je bilo izvedeno v slikarjevi delavnici. Pri obravnavanih slikah vse kaže na to, da je tkanino razrezala, sestavila in sešila izurjena roka, ki je poznala in upoštevala mehanske lastnosti tekstila. Posamezne kose so v celoto sešili v vodoravni smeri, dosledno, krajec na krajec tako, da tečejo votkovne in osnovne niti v isti smeri. Šivi so vidni na licu obeh slik. Med izvajanjem posegov smo ugotovili, da so ponekod poškodovani. Šivalna preja je bila pretrgana, konci so bili nacefrani, vlakna so štrlela iz vitja ali je preja celo manjkala, kar je nakazovalo na možnost, da so bili šivi na hrbtni strani slik porezani. Rezanje oz. izravnava izbočenih šivov je bila v preteklosti pogosta praksa pri pripravi slik na podlepljanje. S tem so želeli izogniti se negativnemu odtiskovanju šivov na licu slik in ustvariti ravno površino, ki jo je bilo lažje obdelovati.

Sliki *Predstavitev* in *Pokol* nista ohranjeni v izvirni velikosti, saj sta na vseh straneh obrezani. Pri združevanju slik v enoten format so na sliki *Predstavitev* s poševno prirezano levo stranjo vzpostavili poravnavo z desnim robom slike *Pokol*. Če med seboj primerjamo njuni velikosti, sta morala biti oba originalna nosilca zagotovo nekoliko večja, vsekakor pa enakih dimenzij, s predpostavko, da sta sliki sestavljali delavniško in praznično lice desnega orgelskega krila (Brejc, 1983: 26). Sekundarna nosilca sta nudila močno oslabljenima originalnima nosilcema primerno podporo in zagotovila stabilnost slikovnim slojem. Pritrjenost slik na podokvirja je bila primerna, njuna napetost pa ustrezna. Ponekod na robovih so bile vidne starejše poškodbe. Luknjice in predrtine so posledica pritrditve slik z žeblji na podokvir, ostale poškodbe, ki so jih v preteklosti že sanirali, pa so bile posledica naravnega preperevanja platna zaradi fotooksidacije celuloze, kemijskih reakcij s slikarskimi materiali in različnih mehanskih dejavnikov. Na osrednjem delu slike *Pokol* sta bili dve večji luknji, ki so ju v preteklosti zapolnili s platnenimi vstavki, zakitali in večje območje okoli poškodb tudi preslikali. Na licu slike *Predstavitev* sta bili opazni dve linijski poškodbi platna z manjkajočimi slikovnimi sloji.

Pri zadnjem konservatorsko-restavratorskem posegu leta 1959 so sliki napeli na lesena zagozdna podokvirja z opornimi križnimi letvami. Takšni podokvirji so uveljavljeni od 19. stoletja dalje in še danes ustrezajo osnovnim zahtevam preventivnega varovanja umetnine. Les je bil dobro uležan in se ni krivil. Vse zagozde so bile na mestih. Obodne letve so imele distančni rob. Ob pregledu obeh podokvirjev smo ugotovili, da sta bila prvotno manjša in so ju naknadno povečali. Razlog za povečavo nam ni znan, kljub temu lahko trdimo, da sicer skopi podatki o starih posegih dokazujejo, da so se naši predhodniki zavedali pomena renesančnih umetnin in so vanje posegali s tedaj uveljavljenimi konservatorsko-restavratorskimi metodami.

Stanje slikovnih slojev

Ovrednotiti stanje slikovnih slojev pred posegom je za konservatorja-restavratorja vedno svojevrsten izziv, še posebno, če je bila obravnavana slika v preteklosti deležna več obnov in zakrivajo original debeli sloji lakov, retuš in celo preslikav. Analizo očem skritih plasti nam omogočajo optične preiskovalne metode (sliki 1 in 2), brez katerih si danes težko predstavljamo delo v konservatorsko-restavratorski stroki, dejansko stanje pa nam razodene šele fizični poseg v umetnino.

Kot že omenjeno, sta bili sliki *Predstavitev* in *Pokol* od svojega nastanka pa vse do danes večkrat obnovljeni. Njuna izrazito temna in rumenkasta površina je potrjevala, da slikovne sloje prekrivajo debela plast starih nanosov laka in nečistoče, ki so zastirali naslikana prizora, barvne prehode in posamezne detajle ter docela spremenili sicer značilno avtorjevo svetlo paleto. Izbočeni horizontalni šivi, ki so spajali posamezne kose obeh nosilcev, so ostali dobro vidni, vidna pa je tudi izrazita površinska struktura tkanja nosilcev, ki priča o izjemno tankih nanosih originalnih slikovnih slojev. Podloge s prostim očesom ni bilo moč zaznati niti na mestih večjih mehanskih poškodb. Šele naravoslovne preiskave so dale konkretnejše podatke. Analiza presekov odvzetih vzorcev z optično mikroskopijo obrusov v vidni in ultravijolični svetlobi je potrdila prisotnost izolacijskega sloja oz. podloge. Identifikacija posameznih komponent je določila prisotnost kalcijevega sulfata dihidrata in proteinov (Kavkler, 2016: 7–14), zaradi česar lahko sklepamo, da je avtor za izolacijski sloj uporabil klasično podlogo, pripravljeno iz mešanice živalskega kleja in fino mlete surove bolonjske krede. Podloga, imenovana tudi *gesso sottile*, je tudi sicer značilna za srednjeveško in renesančno slikarstvo beneške regije (Stols-Witlox, Ormsby, Gottsegen, 2012: 163). Na tako pripravljeno platno je avtor s tankimi, ponekod lazurnimi nanosi naslikal oba prizora. Čeprav je posamezne detajle poudaril z debelejšimi nanosi, lahko barvno plast opredelimo kot izredno tanko. Z različnimi analiznimi metodami so bili določeni naslednji pigmenti (Ropret, Legan, Retko, 2011: 5, 47–52). Na rdečih območjih prevladujeta svinčeva rdeča (minij) in cinober. Na območjih z visoko koncentracijo železa (predvsem pri rdečih tonih) pigmentov z analizo ni bilo mogoče določiti. Najverjetneje gre za zemeljske pigmente, rdeče gline, ki so tudi sicer značilne za mojstrovo paleto. Od rumenih pigmentov so identificirani orpiment in svinčeva kositrno rumena ter naravni rumeni oker. Od zelenih je bil prepoznan paratacamite, medtem ko enega od zelenih vzorcev ni bilo moč identificirati. Na njem je določen element baker, zaradi česar lahko sklepamo, da gre za bakrov pigment verdigris. Večina upodobljenega zelenja na slikah je namreč danes popolnoma rjava, za verdigris pa je značilno, da ta, sicer intenzivni zeleni pigment zaradi neobstojnosti in reaktivnosti z leti postane rjav, včasih celo črn. Od modrih pigmentov sta bila določena smalt in azurit. Črna območja so naslikana z ogljikovo črno, na sliki *Pokol* pa je bil na upodobitvah oklepa in ostalih kovinskih detajlov identificiran pigment stibnit. Zanj je značilen kovinski sijaj, zato ni naključje, da ga je Carpaccio uporabil prav za upodobitev metalnih elementov. Določeni so bili še svinčeva bela,

9 Takrat so bili na zavodu poleg Mihe Pirnata st. zaposleni še Tomaž Kvas in Emil Pohl, akademska slikarja, restavrator Anton Demšar in pomočnica Adela Demšar. Njihova vključenost v konservatorsko-restavratorske posege nam ni znana.

10 V zapiskih Mihe Pirnata st. smo našli recepturo za uporabljeno voščeno-smolno maso. Pripravili so jo iz 5 delov beljenega čebeljega voska, 1 dela kolofonije in 1 dela benečanskega terpentina.

11 Zapisa iz Pirnatovega rokopisa: »Vosek za utrjevanje slik (zadaj) 70 % voska, 30 % damarja.«; »Emulzija za impregniranje hrbtne strani slike pred rentoilažo: celuloza (cca 2 dela, alkidal (cca 1 del), kolofonijev vosek (množina po stanju slike), malenkost cink. kleja. Če je bolezensko stanje slike zelo težko, se doda še malo lanenega olja, ki napravi sliko bolj voljno. /.../ Konsistenca te emulzije naj bo kot pri majonezi. Po potrebi se doda še malo terpentina.«

12 Po pričevanju Mihe Pirnata st. so izraz japan papir/japonski papir uporabljali na splošno za vrsto tankega papirja, ki so ga kupovali v Tovarni celuloze Medvode, iz njegovih zapiskov iz leta 1966 pa vidimo, da je bil v uporabi tudi izraz »svileni papir«.

kalcijev sulfat dihidrat (mavec), kalcit, kremen in huntite (vendar ta samo v enem primeru). Prisotnost črnega svinčevega oksida platnerita je verjetno posledica degradacije pigmentov svinčeve bele oziroma svinčeve rdeče. Analiza sestave veziva pigmentov ni dala jasnih rezultatov, saj sta bili sliki zaradi podlepljanja v preteklosti povsem prepojeni z voščeno-smolno maso. Domnevno gre za tempero, jajčno tempero, morda celo mastno jajčno tempero, vendar je bilo prisotnost olj težko dokazati.

Odstranjevanje vrhnjih slojev nečistoče, potemnelih zaščitnih slojev, preslikav in retuš je odkrilo značilno svetlo paleto beneškega mojstra, a žal tudi dejstvo, da je barvna plast v slabšem stanju, kot smo sprva domnevali. Pod lakom smo našli starejše trdovratnejše retuše, na več mestih pa tudi preslikave. Med bolj izstopajočimi je bila preslikava na osrednjem delu slike *Pokol*, ki je zakrivala dve večji sanirani poškodbi tkanega nosilca. Poškodbi so prekrili z rjavo barvo, s katero so preslikali tudi dobršen del originalne poslikave okoli njih; med posameznimi ohranjenimi fragmenti tudi lepo ohranjen subtilno naslikan ženski profil (slika 8). Na sliki *Predstavitev* je izstopala preslikava na nogi sprednje moške figure v rdeči draperiji. Pod rjavo preslikavo so bili fragmenti originalnega zelenega obuvala. Podroben pregled obeh slik je pokazal drobne razpoke slikovnih slojev, ki so se neenakomerno širile po celotni površini obeh slik. Razpoke slikovnih slojev so bile izrazitejše v okolici mehanskih poškodb. Barvna plast je bila sicer stabilna, kar lahko pripišemo tudi podlepljanju z voščeno-smolno maso, ki je poleg platen prepojila tudi barvno plast in podlogo, vendar zaradi razsežnosti poškodb nikakor ne moremo govoriti o dobrem stanju originalnih slojev (slika 9). Nasprotno. Najbolj opazna je bila površinska odrgnjenost. Na vrhovih niti tkanja je barva ponekod zlizana do samega nosilca. Tudi ta območja so bila v preteklosti večinoma preslikana, saj je bilo to veliko enostavnejše in hitrejše kot natančno retuširanje neštetih drobnih poškodb, kar smo kasneje konservatorji-restavratorji izkusili na lastni koži. Poškodbe slikovnih slojev so se pojavljale po celotni površini slike, najobsežnejše pa so bile na robovih, ker so obe sliki v preteklosti obrezovali in nato z mnogimi žebljički pritrjevali na podokvir kar preko originalne poslikave. Zaradi povešanja tkanine, najverjetneje pa tudi zaradi pogostega odpiranja in zapiranja orgelskih vrat v preteklosti sta bili sliki močno poškodovani tudi na spodnjem robu. Na sliki *Pokol* je bil opazen nenavaden svetlejši pas, ki je potekal po celotni vertikali levega roba slike in je bil širok približno 8 cm. Širina pasu ni bila enotna, ker je bil rob slike odrezan neenakomerno oz. se je proti vrhu ukrivljal v desno. Svetlejši rob je bil posledica lepljenja obeh orgelskih slik v enoten format. Poseg so zaključili z nanosom zaščitnega laka, zato je bil pas, ki ga je prekrival desni rob slike *Predstavitev*, nelakiran in posledično svetlejši. Nenavaden je bil tudi temneje obarvani pas na desnem robu slike *Predstavitev*, ki je bil na vrhu slike širok približno 10 cm in se je trikotno ožil do dobre sredine desnega roba slike. Na tem pasu je bila barvna plast močno mehansko poškodovana, obenem pa so bili na njem vidni fragmenti neoriginalne barve. Podroben pregled je privedel do zanimivega zaključka. Ko sta bili sliki v preteklosti sestavljeni v enoten format, je bilo to območje preslikano z namenom, da se dva popolnoma različna prizora v sredini optično spojita. Preslikavo so najverjetneje pri zadnjem posegu v šestdesetih letih prejšnjega stoletja odstranili, kar pa v ohranjenih zapisnikih ni zabeleženo.

Konserviranje in restavriranje 2015–2018

Odstranjevanje starih zaščitnih slojev, retuš in preslikav

Pregled slik je pokazal, da je na površini več plasti starih zaščitnih premazov, ki so v letih od njihovega nanosa močno potemneli. Intenzivna zelenkasta fluorescenca v ultravijolični osvetlitvi je nakazovala prisotnost lakov na osnovi naravnih smol. Stare retuše in preslikave so se odražale kot temne lise, ki so se med seboj razlikovale v intenzivnosti in izrazitosti robov, kar dokazuje, da so bile nanesene med vsaj dvema različnima posegoma v preteklosti (slika 10). Na več mestih so bili odvzeti vzorci slikovne plasti, katerih stratigrafija in pregled z ultravijolično svetlobo sta dokazala prisotnost treh različnih nanosov zaščitnih premazov (Gosar Hirci, Ropret, Retko, Bajdè, Legan, 2012: 26). Določitev natančne sestave in izvora posameznih zaščitnih slojev zaradi materialov, dodanih med preteklimi konservatorsko-restavratorskimi posegi, ni bila mogoča.

Iskanje najprimernejših sredstev za odstranjevanje neoriginalnih zaščitnih in barvnih nanosov smo s sondiranjem najprej izvedli na sliki *Predstavitev*. Avtorjeva tehnologija, hramba in stanje slik so omogočali uporabo enakih metod in materialov tudi na sliki *Pokol*. S slik smo najprej odstranjevali površinske nečistoče, voščeno pasto, lake na smolni osnovi ter na koncu še oljne retuše in preslikave. Sondiranje in odstranjevanje neoriginalnih slojev je potekalo v posameznih fazah, napredek pa smo ves čas spremljali s pregledovanjem stanja v ultravijolični osvetlitvi (sliki 11 in 12).

V času od zadnjih konservatorsko-restavratorskih posegov se je na površinah slik nabrala precejšnja količina prašnih delcev in drugih snovi, ki so sestavljali nevezano in vezano nečistočo. Nevezano nečistočo smo s površine slik odstranili z ometanjem in odsesavanjem. Pred začetkom odstranjevanja neoriginalnih slojev je bilo v sklopu raziskav MOLAB na obeh slikah opravljeno testiranje topnosti površinske nečistoče in lakov. Za odstranjevanje vezane površinske nečistoče je bila preizkušena umetna slina,[13] kasneje pa je bila izven sklopa raziskav testirana še destilirana voda. Obe sredstvi sta pokazali primerljive rezultate, zato smo se odločili za uporabo destilirane vode in se tako izognili nepotrebnemu vnašanju novih materialov v sliko. Neinvazivne preiskave (infrardeča spektroskopija v bližnjem in srednjem območju – nIR in mIR) so med drugim pokazale prisotnost lipidov na površini slik (Ropret, Legan, Retko, 2011), in sicer tako na očiščenih kot tudi na neočiščenih območjih. Na podlagi izkušenj in analize starih posegov smo sklepali, da gre za vosek. Vzroki za njegovo prisotnost so lahko različni. Morda je šlo za ostanke voščeno-smolne mase za podlepljanje slik ali pa za sloj voščene paste (Pirnat, 1966, 2015), ki so jo konservatorji-restavratorji nanesli na damar lak in s tem zmanjšali njegov sijaj. Ker je bila plast voska enakomerna, na nekaterih mestih pa so bile vidne celo poteze čopiča, menimo, da je bil na površini tanek nanos voščene paste. Odstranili smo ga z white spiritom. Meritve IR spektroskopije v srednjem območju so po odstranjevanju omenjenega sloja še vedno kazale prisotnost lipidov (Ropret, Legan, Retko, 2011a, 2011b). Glede na to, da sta bili sliki podlepljeni z voščeno-smolno maso, ni bilo mogoče določiti, ali smo voščeno pasto v celoti odstranili. Sliki imata izredno tanke slikovne sloje, zato je med odstranjevanjem najverjetneje prišlo do prodiranja voščeno-smolne mase na površino slike.

Sledilo je preizkušanje različnih snovi za odstranjevanje degradiranih smolnih lakov. V sklopu projekta MOLAB so bile z neinvazivnimi točkovnimi meritvami testirane različne metode, z analizo rezultatov pa je bila določena najprimernejša (Gosar Hirci, Ropret, Retko, Bajdè, Legan, 2012: 26). Preizkušene so bile mešanice izooktana in etanola (IE) v različnih volumenskih razmerjih: IE2 (80 : 20), IE4 (60 : 40) in IE6 (40 : 60). Na podlagi meritev je bila izbrana topilna mešanica IE4, ki ni vplivala na sestavo slikovnih plasti pod njim (Ropret, Legan, Retko, 2011). Med delom se je izkazalo, da je bila mešanica IE6 zaradi hitrejšega delovanja učinkovitejša, medtem ko smo mešanico IE4 uporabili na občutljivih predelih. Na sliki *Predstavitev* so bili to rdeči in zeleni toni, na sliki *Pokol* pa rdečerjavi. Skupaj z lakom smo odstranili tudi večino neustreznih mlajših retuš, ki so bile najverjetneje izvedene leta 1959 (slika 13). Odstranitev lakov je razkrila, da je poškodovanost slikovnega sloja obsežnejša, kot je bilo videti sprva. Prav tako je postalo očitno, da je na površini še vedno prisotna plast nečistoč in ostankov laka, ki so zakrivali živahen renesančni kolorit. Videz slike pa je kazilo tudi precejšnje število starejših retuš in preslikav. Z opravljenimi analizami žal nismo mogli določiti njihove starosti, trdovratnost retuš in preslikav pa sta nakazovali, da so najverjetneje starejšega datuma. Ali izhajajo iz časa, ko so sliki združili v enoten format, lahko zaradi pomanjkanja dokumentacije zgolj ugibamo.

Odstranitvi mlajšega sloja laka je sledilo ponovno preizkušanje topilnih mešanic za odstranjevanje ostankov starejšega potemnelega laka in nečistoč. Ponovno smo preizkusili delovanje pufrnih raztopin. Testirali smo raztopini pH vrednosti 7,1[14] in 8,6[15] (Cremonesi, 2015), ki pa sta bili v večini neučinkoviti. Delovanje je bilo opazno le pri pufrni raztopini z višjo pH vrednostjo, vendar žal ni bilo zadovoljivo. Kot učinkovitejše se je izkazalo voščeno milo s pH vrednostjo 8,2–8,7[16], ki je bilo med preizkušanjem naneseno bodisi direktno na površino bodisi preko tanke plasti specialnega papirja Lens Tissue L2, ki je deloval kot vmesnik. Delovanje voščenega mila z uporabo vmesnika je bilo enakomernejše v primerjavi z direktnim nanosom na površino. Poleg tega so lističi delovali kot pivniki, s pomočjo njihove obarvanosti pa smo lažje nadzirali čas delovanja topila. Že po nekaj sekundah so se namreč rumenkasto obarvali, kar je potrjevalo učinkovitost topila (slika 14). Z lističi smo obenem odstranili tudi velik del raztopljenih ostankov laka in večino voščenega mila. Ostanke mila smo dokončno odstranili s suhimi bombažnimi tamponi in nazadnje še z ovlaženimi z destilirano vodo. Ko se je površina osušila, smo voščeno komponento mila, ki se je odražala kot sivkasta koprena, odstranili s tamponi, rahlo prepojenimi z white spiritom. Postopek je potekal izjemno pazljivo, med delom pa smo sledili oblikam barvnih ploskev. Izogibali smo se nanosom mila po kvadratih, saj bi po delu lahko ostal viden neželen vzorec. Kjer so bile enakomerne barvne površine prevelike, da bi naslikanim oblikam lahko obvladljivo sledili, smo pazljivo čistili po manjših območjih, ki so omogočala varno odstranjevanje in nadziranje obdelovane površine. Število nanosov voščenega mila je variiralo glede na strukturo površine in debelino neoriginalnega sloja.

Med odstranjevanjem ostankov najstarejšega laka smo odstranili tudi dober del preslikav, ki so kazile podobo slik, vendar smo morali za njihovo popolno odstranitev ponovno prilagoditi metodologijo. Preizkusili smo mešanice topil: izooktana in acetona IA2 (80 : 20) in IA8 (20 : 80), acetona in etanola AE2 (80 : 20) in AE8 (20 : 80) in izooktana in etanola IE2 (80 : 20). Nobena izmed njih ni učinkovala. Sledilo je preizkušanje topil in njihovih mešanic v zgoščeni obliki, ki omogoča dolgotrajnejše delovanje in zmanjšuje prodiranje topil v sliko. Preizkusili smo etanol gel,[17] gel iz izooktana in etanola IE1,[18] gel iz white spirita in benzil alkohola[19] ter gel iz acetona in benzil alkohola[20] (Cremonesi, 2015). Učinkovit je bil le gel iz mešanice acetona in benzil

13 100 ml destilirane vode (pH 7,2), 0,1 g mucina in 0,1 g triamonijevega citrata.

14 150 ml destilirane vode in 0,72 g citronske kisline, nekaj kapljic 1-molarne raztopine natrijevega hidroksida.

15 50 ml citrata pH 7,1, 0,15 g borove kisline in nekaj kapljic 1-molarne raztopine natrijevega hidroksida.

16 Mešanica 1 l destilirane vode, 100 g beljenega čebeljega voska in 40 g jelenove soli.

17 2 ml Ethomeena C-25, 0,5 g Carbopola Ultrez 21, 50 ml etanola, nekaj kapljic destilirane vode.

18 50 ml mešanice topil IE1, 7 ml Ethomeena C-12, 1 g Carbopola Ultrez 21, nekaj kapljic destilirane vode.

19 8 ml white spirita, 2 ml benzil alkohola, 2,5 ml Tweena 20, 0,5 g Vanzana NF-C, 50 ml pufra 8,5.

20 40 ml acetona, 12 ml benzil alkohola, 0,5 g Carbopola Ultrez 21, 2 ml Ethomeena C-25.

alkohola, ki je topil mlajše retuše, na najstarejše preslikave pa ni deloval. Na njih smo preizkusili nabor »tradicionalnih« mešanic topil z dodatkom amonijaka: 2A, 3A in 4A[21] (Cremonesi, 2015), ki so bila prav tako neučinkovita. Nazadnje smo preizkusili tudi dve mešanici v zgoščeni obliki, ki zaradi vsebnosti zelo močnih topil povzročata kemično reakcijo in sta v visokih koncentracijah odsvetovani. Butil acetat/DMF gel[22] se je izkazal za zelo uspešnega, vendar je dimetil formamid (DMF) izjemno toksičen, zato je danes priporočljivejša uporaba dimetil sulfoksida (DMSO). Ker so bili rezultati butil acetat/DMSO gela[23] (Cremonesi, 2015) primerljivi, smo se odločili za uporabo slednjega. Gel smo nanesli izključno na preslikavo in ga pustili učinkovati približno od 30 do 60 sekund, odvisno od debeline neoriginalnega sloja. Preslikavo je omehčal do te mere, da smo jo lahko odstranili z bombažnim tamponom (slika 15). Na mestih, kjer je bila preslikava debelejša, smo z gelom omehčano barvo odstranili mehansko. Kjer so bile preslikave še posebej trdovratne, smo površino po potrebi omočili še z butil acetatom. Delovanje topila smo zaustavili z acetonom, po osušitvi pa obdelovano površino nevtralizirali z white spiritom. Zaradi agresivnega delovanja butil acetata smo nekatere preslikave na poškodovanih predelih le stanjšali in jih kasneje med retuširanjem barvno prilagodili okolici.
Največje presenečenje je skrivala večja preslikava na osrednjem delu slike *Pokol*, pod katero smo našli portret v profilu naslikane ženske (slika 16). Slikovna plast in nosilec sta bila na tem območju močno poškodovana, poleg dobro ohranjenega portreta pa so bili v okolici tudi manjši fragmenti originalne barvne plasti. Naši predhodniki so celotno poškodovano območje prekrili v enotnem rjavem tonu. Na sliki *Predstavitev* sta bila z debelim nanosom črne barve preslikana notranja stran Marijinega ogrinjala in obuvalo moškega v rdečem ogrinjalu, s hrbtom obrnjenega proti gledalcu. Oba sta bila nekoč intenzivno zelenega odtenka, preslikana pa sta bila zaradi obsežnih poškodb. Porajala so se vprašanja o izvoru rumeno-rdečih draperij, vendar tudi naravoslovne preiskave niso podale odgovora. Gre za draperije na sliki *Pokol* pri oblačilu obupane matere na spodnjem delu slike, na sliki *Predstavitev* pa pri ogrinjalu ženske figure ob levem robu. Tanek nanos rdeče barve čez rumeno je bil občutljiv za topila, ki smo jih uporabljali, zato je bilo čiščenje na tem predelu izvedeno v omejenem obsegu. Našim zanamcem bodo morda v prihodnosti na razpolago naprednejše metode, ki bodo omogočale razrešitev vprašanja izvora barvnega nanosa, zaenkrat pa nam strokovna etika narekuje, da ta območja pustimo nedotaknjena.

21 2A je mešanica destilirane vode in amonijaka, dodanega po kapljicah. 3A je mešanica 1 dela destilirane vode, 1 dela acetona, 1 dela etanola. 4A je mešanica 1 dela destilirane vode, 1 dela acetona, 1 dela etanola in amonijaka, dodanega po kapljicah.

22 25 ml butil acetata, 25 ml DMF, 1 g Carbopola Ultrez 21, 6 ml Ethomeena C-25, voda.

23 25 ml butil acetata, 25 ml DMSO, 1 g Carbopola Ultrez 21, 8 ml Ethomeena C-25, 2 ml vode.

Konserviranje in restavriranje nosilcev ter menjava podokvirjev

Konserviranje in restavriranje originalnih nosilcev so v veliki meri določali pretekli posegi, pri čemer moramo izpostaviti predvsem problem porezanih šivov in podlepljanje. Po končanem odstranjevanju površinske nečistoče, neoriginalnih lakov, retuš in preslikav smo odstranili sivi dekorativni platneni maski in klejni trak z robov slik. Sliki sta bili podlepljeni z voščeno-smolnim lepilom in na robovih z žeblji pritrjeni na podokvir. Med odstranjevanjem dekorativne maske s slike *Predstavitev* smo opazili, da je ponekod prišita na podlepljeno platno. Šive smo previdno porezali in odstranili.
Pred snemanjem slik s podokvirjev, odstranjevanjem podlepljenih platen in čiščenjem hrbtišč smo lice slik zaščitili z lističi specialnega papirja Lens Tissue L2 in lepilom, ki je obenem služil tudi kot utrjevalec. Izbiro metodologije nam je narekovala že prisotna voščeno-smolna masa. Uporabili smo kompatibilno, a močnejše in sodobnejše lepilo Beva 371, ki ima v primerjavi z voščeno-smolno maso boljše lastnosti. Lističe specialnega papirja smo nalepili na površino lica slik v enem sloju s 5-odstotno raztopino Beve 371 v white spiritu. Na predelih večjih poškodb in šivov smo uporabili dva sloja papirja, saj smo v tej fazi že domnevali, da so bili šivi na obeh nosilcih porezani in s tem oslabljeni. Namen postopka je bil zaščititi slikovne sloje pred mehanskimi poškodbami, do katerih bi lahko prišlo med nadaljnjimi konservatorsko-restavratorskimi postopki, ki smo jih izvajali na zadnji strani slik. Obenem je zaščita omogočala tudi ohranjanje obeh nosilcev v enotnem formatu, saj bi ta zaradi porezanih šivov med izvedbo postopkov lahko razpadla.
Sledilo je snemanje slik s podokvirjev. Zaradi prepojenosti platen z voščeno-smolno maso smo žeblje z lahkoto odstranili. Prilepljeno platno smo s hrbta originala odstranili v enem kosu, z vlečenjem pod ostrim kotom (slika 5). Po postopku se je pokazalo, da je bilo voščeno-smolno lepilo na hrbet slik naneseno neenakomerno, zato smo debelejše sloje najprej stanjšali s skalpeli. Ker sta bila nosilca močno degradirana in krhka, je bila med delom potrebna velika mera previdnosti. Naleteli smo tudi na star restavratorski poseg, ki ga pri svojem delu redko srečamo. Predeli šivov in robovi slik so bili namreč ojačani z »japonskim« papirjem, ki smo ga v nadaljevanju odstranili skupaj z lepilom. Na sliki *Pokol* smo si v okolici večjih poškodb nosilca pomagali tudi s segrevanjem lepila z restavratorskim fenom.
Lepila na osnovi voska in naravnih smol so kisla in povzročajo spremembo tona nosilca, podloge in barvne plasti, kar je bilo opazno tudi pri obravnavanih slikah. Prisotne smolne komponente, ki lepilu sicer izboljšajo vezivnost, so bolj kisle od voska in še dodatno prispevajo k propadanju občutljivega celuloznega materiala. Da bi s slik odstranili čim večjo količino voska in smole, smo postopek nadaljevali v nizkotlačni mizi. Ker je njena delovna površina premajhna, smo lahko naenkrat obdelovali le tretjino slike. Površino smo povečali z namestitvijo delovnih miz enake višine ob daljši stranici, kar nam je omogočalo varno premikanje slike med obdelavo. Na površino nizkotlačne mize smo najprej položili filc, ki je med postopkom blažil pritisk slike na perforirano ploskev nizkotlačne mize. Filc smo prekrili s poliestrsko folijo Hostaphan® RN 15 in čeznjo položili šest slojev vpojnega papirja, da bi absorbiral kar največ voščeno-smolnega lepila. Papir smo prekrili s poliestrsko tekstilijo Hollytex, ki je preprečevala zlepljenje slik s papirjem. Na tako pripravljeno površino smo položili sliko z licem, obrnjenim navzgor, in celoto prekrili s poliestrsko folijo Hostaphan RN 15. Temperatura 80 °C in tlak 50 kPa sta povzročila taljenje in prehajanje voščeno-smolne mase v papir. Po približno 10 minutah smo segrevanje izklopili in počakali, da se slika ohladi na sobno temperaturo. Po končanem postopku smo začasno zaščito lica slik odstranili s topilom Shellsol D 40, ostanke utrjevalca Beva 371 pa s topilom Petrol 100–140 °C (slika 17).
Po odstranjevanju podlepljenih platen in odvečne voščeno-smolne mase smo lokalno sanirali prekinjene šive, raztrganine, luknje in preperela območja. Ker je tehnologija predelave prej in tkanin danes industrializirana, je težko najti platna, ki so popolnoma podobna ročno tkanemu, vendar smo se v našem primeru temu zelo približali. Za dopolnitev manjkajočih delov originalnih nosilcev smo izbrali novo laneno platno, s številom niti po osnovi in votku 12/12 cm^{-1}. Platno smo napeli na začasni podokvir in ga prepojili z dvema nanosoma 7-odstotne raztopine zajčjega kleja. Materialno smo se želeli čim bolj približati originalnima nosilcema, zato smo v izbrano platno vnesli tudi staro voščeno-smolno maso. Impregnirano novo platno smo sneli s podokvirja, ga položili na nizkotlačno mizo ter prekrili z enim od platen, ki smo ju odstranili s hrbtišč originalov. S segrevanjem mize na 80 °C se je novo platno prepojilo s staro voščeno-smolno maso, ki jo originalna nosilca že vsebujeta. Vstavki iz tako obdelanega platna se bodo tako v prihodnosti odzivali in starali podobno kot originalna nosilca. Pred izdelavo vstavkov smo sliki položili z licem na delovno površino in uredili robove poškodb. Pod vsako poškodbo smo nato položili pripravljeno platno in nanj obrisali obliko luknje. Natančno izrezan košček platna smo nato s hrbta vstavili v poškodbo, ga prekrili z lepilnim filmom Beva 371 in armaturo iz specialnega papirja Lens Tissue L2 ter aktivirali lepilni film z grelno lopatico (slika 18). Z armaturo smo v dveh slojih utrdili še šive in močno preperel spodnji del nosilca slike *Predstavitev*. Drobne luknjice, raztrganine in pretrganine, ki so bile za vstavke premajhne, smo prav tako prelepili z armaturo in tako utrdili okolico poškodb ter onemogočili napredovanje poškodb. Vsi na novo dodani platneni vstavki in ojačitve nosilca so v celoti odstranljivi.
V preteklosti sta bila podlepljanje in utrjevanje postopka, s katerima se je močno poseglo v sliko. Danes stremimo k temu, da za podlepljanje izberemo metodo, pri kateri lepilo ne prepoji originalnega nosilca in se ga da v največji možni meri odstraniti. Za podlepljanje degradiranih nosilcev smo uporabili poliestrsko platno s številom niti po osnovi in votku 19/19 cm^{-1}, teže 210 g/m^2 in širine 314 cm, ki je manj občutljivo za vlago kot tradicionalno laneno. Izbrano platno smo napeli na začasni podokvir in ga dvakrat impregnirali z akrilno emulzijo Lascaux Hydro-Grund, razredčeno s tremi deli vode. Namen impregnacije je, da se lepilo za podlepljanje obdrži na površini novega platna. Ker sliki zaradi preteklih konservatorsko-restavratorskih posegov vsebujeta voščeno-smolno maso, smo izbrali kompatibilno lepilo Beva 371 v obliki filma in s tem tudi zmanjšali izpostavljanje slik previsoki temperaturi. Lepilni film smo zalikali na novi platni. Velikost apliciranega filma je ustrezala velikosti novih podokvirjev (422 × 148 cm). Podlepljanje smo nadaljevali v nizkotlačni mizi, ki smo jo prekrili s filcem in poliestrsko folijo Hostaphan RNT 36, nanjo položili novo platno z lepilnim filmom in nato še sliko, obrnjeno z licem navzgor. Odvod zraka smo vzpostavili preko platnenih trakov. Lice slike smo prekrili s poliestrsko folijo Hostaphan RNT 36, ki je preprečila zlepljenje s tanjšo folijo Hostaphan RN 15, s katero smo na koncu prekrili celotno delovno površino mize, na robove pa smo namestili uteži. Sledila sta segrevanje slike na 65 °C in vzpostavljanje pritiska 20 kPa. Ko je temperatura dosegla 65 °C, smo segrevanje izklopili, pritisk pa rahlo povečali in ga izklopili šele, ko se je slika ohladila na sobno temperaturo. Kot že omenjeno, smo zaradi velikega formata vsako sliko v mizi obdelovali po tretjinah. Pred napenjanjem slik na nova podokvirja smo odprta območja novih platen prelepili z novima maskama iz lanenega platna. Maski izpostavljene dele platen ščitita pred nečistočo iz okolja, obenem pa sliki estetsko dopolnita.
Za sliki smo izdelali podokvirja enakih dimenzij kot predhodna, z vgrajeno zaščito hrbtišča (Gosar Hirci, 2007: 25). Letve so izdelane iz masivnega lesa topolovine širine 8 cm. Na zunanjem robu obodnih letev so utori, kamor so nameščene distančne letvice, ki imajo T-profil. Pod utorom je sistem vzmeti, ki lahko s privijanjem vijakov distančni rob izrine do 3 cm na vsaki stranici. To je mobilen del okvirja, ki omogoča uravnavanje napetosti platna. Vgrajena zaščita hrbtišča je 10 mm oddaljena od zadnje strani slik. Izdelana je iz vezane smrekove plošče debeline 6 mm in varuje hrbtno stran pred mehanskimi poškodbami in umazanijo ter upočasnjuje vpliv neugodnih klimatskih razmer. Sliki sta na nova podokvirja pritrjeni s paličnimi sponkami preko podlepljenih platen.

Kitanje

Kitanje Carpaccievih del *Pokol* in *Predstavitev* igra pomembno vlogo pri njuni prezentaciji, obenem pa ščiti odprte predele originalnega nosilca slike pred direktnimi vplivi iz okolja. Poznavanje sestave izvornih in kasneje dodanih

materialov nam je olajšalo izbiro in potek konservatorsko-restavratorskih posegov, kot tudi nabor materialov za njihovo izvedbo. Poškodbe originalnih slikovnih slojev najdemo pri obeh slikah. Pri sliki *Pokol* so te nekoliko obsežnejše, saj obsegajo poleg poškodovanih robov tudi večjo poškodbo na spodnjem delu slike in dve večji poškodbi v osrednjem delu. Pri sliki *Predstavitev* so poškodbe manj obsežne, predvsem ob robovih in v spodnjem delu slike. To je za gledalca, čigar oko se namesto na celoto osredotoča na nepravilnosti slikovne površine, zelo moteče. Uspešnost rekonstrukcije slikovnega sloja je med drugim močno odvisna od izbranega kita, načina kitanja in strukturiranja, s čim bolj verodostojnim posnemanjem površine obravnavane slike. To oblikujejo nosilec, avtorjevi karakteristični slikovni nanosi, naravno staranje materialov in nepravilnosti, ki so nastale kot posledica okoljskih vplivov (Knut, 1999: 244).

Pri izbiri kita moramo biti pozorni na reverzibilnost uporabljenih materialov, občutljivost za klimatske spremembe, mehansko in dimenzionalno stabilnost ter kompatibilnost z originalnimi materiali v sliki, upoštevajoč kemične, fizikalne in mehanične lastnosti veziva in polnila (Fuster-López, 2012: 587). Ravno tako ne smemo pozabiti na barvno posnemanje originalne podloge, ki nam pomaga doseči globino in tonski razpon originalnih barvnih nanosov (Fuster-López, 2012: 603). Pri Carpaccievih slikah je bila originalna podloga bela. Z upoštevanjem naštetih zahtev in domnevne sestave originalne podloge je bil klejno-kredni kit logična izbira. Poleg tega je to material, s katerim imamo večletne izkušnje. Zaradi prepojenosti obeh slik z voskom je obstajala nevarnost slabšega oprijema kita z mastno površino ter s tem tudi odstopanja in odpadanja. Alternativa klejno-krednemu kitu je bil Beva kit, sintetični material, kompatibilen z naravno voščeno-smolno maso (Knut, 1999: 242). Izbira materiala je temeljila na opravljenem preizkusu oprijemljivosti obeh kitov, izvedenem na platnu, prepojenem z voščeno-smolno maso. S takim platnom je bil podlepljen originalni nosilec ene od slik. Obe vrsti kita sta pokazali dobro oprijemljivost na pripravljeno podlago in nam s tem olajšali odločitev. S poškodb na slikah smo nato odstranili stare restavratorske materiale in stabilizirali slikovne sloje. Območja, na katerih je skupaj s slikovnim slojem manjkal tudi originalni nosilec, smo nadomestili z vstavki, narejenimi iz omrtvičenega in impregniranega platna. S tem smo omejili njegovo vpojnost, ki bi v nasprotnem primeru lahko poslabšala konsistenco kita. Z vstavki smo zmanjšali globino poškodb. Kit smo pripravili iz bolonjske krede, ki smo jo presejali skozi sito in jo postopoma, do nasičenja, dodajali v toplo 7-odstotno raztopino zajčjega kleja. Za zmanjšanje vpojnosti in izboljšanje viskoznosti smo pripravljeni kit obogatili z manjšo količino beljenega lanenega olja. Segreti kit smo v poškodbe nanašali s čopičem postopoma, v tankih plasteh in na predhodno posušeni sloj. Z večplastnim nanašanjem preprečujemo premočno krčenje in posledično pokanje kita med sušenjem. Na večjih površinah smo bolj enakomeren nanos dosegli z uporabo mehkih ploščatih čopičev različnih širin. Dobro posušene površine smo nato prilagodili višini originalnega slikovnega sloja. V ta namen smo uporabili različne brusne papirje, s katerimi smo pridobili gladko in enakomerno površino. Robove, ki se stikajo z originalom, in manjše zakitane poškodbe smo zaradi boljše kontrole in večje natančnosti obdelovali s kožnimi skalpeli različnih nastavkov. Odvečni kit smo z originalnega barvnega sloja odstranjevali z rahlo navlaženimi vatnimi tamponi, medtem ko smo ob robovih zakitanih površin uporabili mešanico vode in etanola. Na ta način smo zmanjšali vnos vode in skrajšali čas izhlapevanja ter tako preprečili, da bi se obdelani kit razmočil in izgubil dodelano formo.

Morfologija originalne slikovne površine je pri obeh Carpaccievih slikah zelo sorodna. Pogojena je z močno zrnato strukturo originalnega nosilca slike, stkanega iz ročno spredenih, ponekod zadebeljenih niti osnove in votka, katerih obrise zaznamo skozi zelo tanek slikovni sloj. Osnovno vodilo izbrane metodologije strukturiranja zglajenih zakitanih površin je bilo pri obeh slikah enako, z manjšimi različicami v sami izvedbi. Za simulacijo tkanja smo preizkusili platna različnih gostot in izbrali redkejše tkano tkanino, s katero smo pridobili izrazitejši odtis, ki se je na zakitani površini pokazal v negativu. V določenih primerih zna biti to moteče, vendar se je v našem primeru odtisnjena struktura zadovoljivo povezala s površino originala (slika 19). Klejno-kredni kit ni termoplastičen, zato smo za mehčanje površine preizkusili dve varianti. Pri sliki *Pokol* smo zglajeni kit najprej premazali z etanolom in na zmehčano površino s segreto grelno lopatico vtisnili platno, pri sliki *Predstavitev* pa smo platno, prepojeno z mešanico etanola in vode, zalikali v suho površino. Oba pristopa sta pokazala optimalne rezultate. Pri vtiskovanju platna smo pazili, da se je smer tkanja ujemala s smerjo niti originalnega nosilca. Pozorni smo bili tudi na primerno globino odtisa. Preplitek odtis lahko namreč med retuširanjem z barvo popolnoma zalijemo in prekrijemo, medtem ko je preglobok odtis z barvo težje prekriti, kar lahko oteži izvedbo retuše. Nadaljevali smo z imitacijo zadebeljenih in na površini slike močno izraženih niti tkanja. Gradili in povezovali smo jih v tehniki pastiglie, z večplastnim, točkovnim nanašanjem nekoliko gostejšega kita, ki smo ga po sušenju oblikovali s kožnimi skalpeli (slika 20). Pri izvedbi je bila ključnega pomena stranska osvetlitev slike, ki je poudarila karakter površine, sestavljene iz tekstur, vzorcev in njej specifičnih nepravilnosti (slika 21). Olajšala nam je potek dela, ki smo ga lažje spremljali in nadgrajevali. Uspešnost opravljenega posega se je dokončno pokazala šele po retuširanju zakitanih površin in nanosu zaščitnega sloja laka. Obsežno kitanje s poudarkom na strukturiranju je bil svojevrsten izziv, ki smo se ga lotevali premišljeno in z velikim spoštovanjem do ohranjenega originala.

Retuširanje in lakiranje

Izbrana metodologija retuširanja na slikah *Pokol* in *Predstavitev* je temeljila na izbiri ustreznih materialov, ki so kompatibilni z originalnimi, reverzibilni in stabilni. Na trgu je danes dostopnih veliko preverjenih materialov, zato uporaba neobstojnih tehnik ni opravičljiva. Retuš nismo izvajali parcialno, temveč smo jih gradili enotno na celotni barvni površini, saj s takim pristopom lažje ocenimo, kdaj je delo zares končano. Tak način retuširanja je na tako velikih formatih težje izvedljiv, ker dela pogosto ne izvaja zgolj ena oseba. Na Carpaccievih slikah nas je istočasno delalo več konservatork-restavratork, praviloma po dve na vsaki, po potrebi tudi tri. Pred praktičnim delom smo si najprej zastavile nekaj temeljnih vprašanj in jih predebatirale. Kakšen pristop izbrati: celostni ali lokalni? Kakšen bo obseg izvedbe? Ali retuširati le manjkajoče dele ali tudi območja zbledelosti in spremembe tona originala? Ali imamo dovolj informacij za izvedbo rekonstrukcije na območjih obsežnejših poškodb in kako ravnati z vizualno motečimi ostanki preslikav, ki jih ni bilo mogoče v popolnosti odstraniti? Vprašanja so bila izpostavljena tudi na zasedanju strokovne komisije, za mnenje o izvedbi rekonstrukcije na območjih večjih poškodb pa smo se obrnili tudi na mednarodno priznanega strokovnjaka za retušo, konservatorja in restavratorja Stefana Scarpellija.

Retušo smo izvajali v dveh temeljnih fazah. Za podlaganje smo uporabili kakovostne gvaše. Tehniko gvaša odlikujejo gostota, kritnost in svetlost barv, saj barve poleg pigmentov vsebujejo tudi belo kredo. Ker je ta vodotopna, predhodno lakiranje slik ni bilo potrebno. Barve smo na območja poškodb nanašali večinoma monokromatsko. Pri tem smo upoštevali smer barvnih nanosov oz. avtorjeve poteze čopiča, če je bilo to razvidno, na mestih večjih poškodb pa smo tonsko sledili risbi oz. kompoziciji poškodovanih detajlov. Na območjih, kjer so bili na vrhovih niti tkanja originalni slikovni sloji zdrsani do samega nosilca, predhodno kitanje ni bilo mogoče, zato smo barvo nanašali direktno na neštete drobne poškodbe. Tak pristop ni bil problematičen, saj so originalni slikovni sloji izjemno tanki, nosilca pa zaradi utrjevanja in podlepljanja v preteklosti popolnoma impregnirana. Podlaganje je praviloma potekalo v svetlejših in rahlo hladnejših barvnih tonih. Zasičenost površine je pomembna za nadaljnjo gradnjo retuše, zato je bilo treba na nekaterih območjih barvo nanesti v več slojih. Gvaši po lakiranju postanejo temnejši, zato smo ustreznost izbranih tonov sproti preverjali z bombažnim tamponom, rahlo prepojenim z white spiritom. Na ta način barve za kratek čas dosežejo ton, ki ga bodo imele po nanosu laka. Premišljeno tonsko podlaganje nam je olajšalo gradnjo zaključne faze retuše – finalizacijo. Podlaganje smo zaključili z vmesnim lakiranjem slik s smolnim lakom, pripravljenim po tradicionalni recepturi iz smole damar, raztopljene v rektificiranem terpentinu v razmerju 1 : 4, ki smo ga na lice slik nanesli s širokimi ploščatimi čopiči v tankem sloju. Vmesni nanos laka poenoti sijaj retuširanih območij in originala, hkrati pa tvori izolacijski sloj med ohranjenim originalom in finalnim retuširanjem.

Za finalizacijo retuše smo izbrali smolne barve Gamblin Conservation Colors, ki jih odlikujeta stabilnost in reverzibilnost in so namenjene prav uporabi v konservatorsko-restavratorski stroki. Izdelane so iz visokokakovostnih pigmentov in veziva – sintetične smole z nizko molekulsko maso Laropal A-81, raztopljene v mešanici naftnega destilata. Kot medij smo uporabili aromatično topilo Shellsol A, sijaj retuše pa smo po potrebi uravnavali z dodajanjem kapljic istega laka, kot smo ga uporabili za vmesno lakiranje.

Pri gradnji retuše smo upoštevali princip od manjšega k večjemu. Najprej smo retuširali drobne poškodbe in območja, na katerih je situacija jasna, ter sproti ves čas preverjali izvedbo na celotnem formatu in pazili na ravnovesje. Na ta način nas je retuša sama vodila do končne izvedbe (sliki 22 in 23). Pri delu smo uporabljali tanke čopiče, s katerimi smo barve nanašali v obliki črtic, pikic in lazur. Uporabi bele barve smo se izogibali, da retuširanih območij ne bi preveč zasitili. Retuše morajo delovati zračno, od blizu celo nekoliko nedokončano.

Na mestih večjih poškodb, ki so motile percepcijo likovnega dela, smo se po posvetovanju s strokovno komisijo odločili za izvedbo rekonstrukcije. Rekonstrukcija je v praksi upravičena, kadar so manjkajoči predeli s slikarskega stališča predvidljivi oz. kadar imamo v okolici poškodbe dovolj ohranjenih detajlov in ali fragmentov, ki nas vodijo pri rekonstruiranju manjkajočih delov kompozicije. Kadar situacija ni jasna, je izjemnega pomena nabor vseh podatkov, ki so nam na voljo, na primer stare reprodukcije ali fotografije, na katerih je obravnavano delo ohranjeno v boljšem stanju, informacije pa lahko iščemo tudi na podobnih motivih istega avtorja. Za Carpacciev pozni slog je značilno variiranje lastnih del oz. posameznih delov kompozicij, kar smo prepoznali tudi pri obeh slikah. Analogijo manjkajočih detajlov smo zato iskali v monografijah in ostali literaturi z natisnjenimi reprodukcijami njegovih del, v Benetkah pa smo si ogledali tudi cikel monumentalnih slik, ki jih je Carpaccio naslikal za učilišče sv. Uršule (Scuola di Sant'Orsola), na katerih so ravno v tistem času zaključevali konservatorsko-restavratorske posege.

Na sliki *Pokol* je veliko figur povzetih po ciklu slik sv. Uršule iz Scuole di Sant'Orsola, skupino s konjenikom na levi pa najdemo na sliki *Jurij ubije zmaja* iz Scuole di San Giorgio degli Schiavoni. Na osrednjem delu slike smo pod obsežno rjavo preslikavo odkrili lepo ohranjen ženski profil. Sicer nevtralna rjava preslikava je optično prekinila figuralno kompozicijo, v kateri se prepletajoče se figure pokola kot reka stekajo v ozadje in izginjajo v fantastični gorati pokrajini. Ker je to edino izrazito manjkajoče območje poslikave motilo percepcijo likovnega dela, smo se odločili, da ga rekonstruiramo (slika 24). Podobno žensko figuro v profilu, ki v bolečini in kot v obrambni gesti steguje roko proti nebu, smo našli na sliki *Mučeništvo in smrt* sv. Uršule. Manjkajoči

del kompozicije smo rekonstruirali na podlagi študije obstoječih oblik in drobnih fragmentov originalne barve v neposredni bližini poškodbe. V pomoč nam je bila digitalna rekonstrukcija, ki je služila za orientacijo med izvedbo. Rekonstrukcijo smo izvedli v tehniki tratteggia, ki temelji na razlikovanju med originalom in retušo, ki ga dosežemo z nanašanjem različnih barv v obliki pokončnih črtic na svetlo podlago. Na ta način rekonstruiran prizor od blizu zlahka razločimo od originala, gledano z razdalje pa kompozicijo poveže v celoto. Rekonstrukcija na sliki *Predstavitev* je bila izvedena na zelenem obuvalu figure v rdeči draperiji in zadnjem delu pasje figure na spodnjem delu slike. Manjkajoče oblike smo upodobili s povezovanjem obstoječih barvnih fragmentov in s študijo stopala figure v identični drži iz avtorjevega zgodnejšega dela *Marijina smrt* (slika 25).

Retuširanje slik smo zaključili s končnim lakiranjem, ki ima poleg funkcije zaščite tudi estetski učinek. Lak je poenotil sijaj površin, zabrisal meje med retuširanimi območji in originalnim barvnim slojem ter poudaril barvne kontraste, intenziteto barv in s tem naslikanim prizorom dodal globino. Načeloma bi se morali konservatorji-restavratorji z lakiranjem približati izvornemu sijaju slike, a dejstvo je, da pri tako starih, poškodovanih in večkrat konserviranih in restavriranih delih žal le redko vemo, kakšen naj bi originalni lak sploh bil. Na obeh slikah je bila barvna plast ob prevzemu prekrita z več sloji neoriginalnih lakov. Izbor materiala so tako pogojevale lastnosti slik, izvedeni konservatorsko-restavratorski posegi, stanje slik in okolje hrambe. Za lakiranje smo uporabili tradicionalno recepturo damar laka, ki velja za zanesljiv material in ga še danes uporabljajo v marsikaterem muzeju svetovnega formata, čeprav po svojih lastnostih ni povsem optimalen, saj je občutljiv za vlago in z leti rumeni. Pripravili smo ga iz rektificiranega terpentina, damar smole, stabilizatorja, ki rumenenje zavira, ter beljenega čebeljega voska.[24] Dodatek čebeljega voska poenoti sijaj, izboljša reverzibilnost ter zmanjša higroskopičnost in krhkost. Zaradi deleža voska smo mešanico pred nanašanjem rahlo segreli, tako da se je vosek v njej popolnoma stalil. Postopek smo izvajali v lakirnici, ki je izdelana in opremljena tako, da nam omogoča varno lakiranje.

Sklep

Konservatorsko-restavratorski poseg na slikah *Predstavitev* in *Pokol* smo zaključili decembra 2018 (sliki 26 in 27). Pred montažo v cerkvi Marijinega vnebovzetja v Kopru smo ju opremili z novima okrasnima okvirjema in paspartujema.[25] Profil je bil povzet po že obstoječih okrasnih okvirjih Benedetta Carpaccia in velike oltarne pale Vittoreja Carpaccia, *Marija na prestolu z detetom in šestimi svetniki*. Odločitev o novih elementih prej sicer neuokvirjenih slik je temeljila predvsem na zakonitostih preventivne konservacije, saj okrasni okvirji niso le estetski dodatek, temveč slike ščitijo med premikanjem, razstavljanjem in hranjenjem. Z novima okrasnima okvirjema je bila montaža umetnin izjemno velikega formata bistveno lažja, obenem pa smo nadgradili pogled na kvalitetno obnovljena likovna dela renesančnih mojstrov (slika 28).

Cilj našega dela je vedno ohranitev in prezentacija avtentičnosti obravnavanega dela, dobrega konservatorja-restavratorja pa poleg strokovnega znanja odlikuje tudi močan čut za moralno odgovornost do umetniškega dela in njegovega gledalca. Vsaka slika je zgodba zase, in čeprav je način izpeljave konservatorsko-restavratorskih posegov odvisen od številnih tehničnih dejavnikov, imata pomembno vlogo pri izvedbi intuitivnost in občutljivost izvajalca. Odgovorno konserviranje in restavriranje ne sme biti ustvarjalen proces sam po sebi, temveč je reševanje zapletenih problemov, ki se ga ne smemo lotevati suhoparno tehnično. Sposobnosti pravilnega razumevanja umetniškega dela, njegove zgodovinske in likovne sporočilnosti in okolja hranjenja vodijo v kakovostno obravnavo konservatorsko-restavratorskega problema, ki izhaja iz pridobljenega tehničnega znanja in etičnega odnosa do umetnine.

24 11 dvojno rektificiranega terpentina, 160 g damar smole, 5 g Tinuvina 292 in 16 g beljenega čebeljega voska.

25 Izdelala sta jih Janez in Franci Novak.

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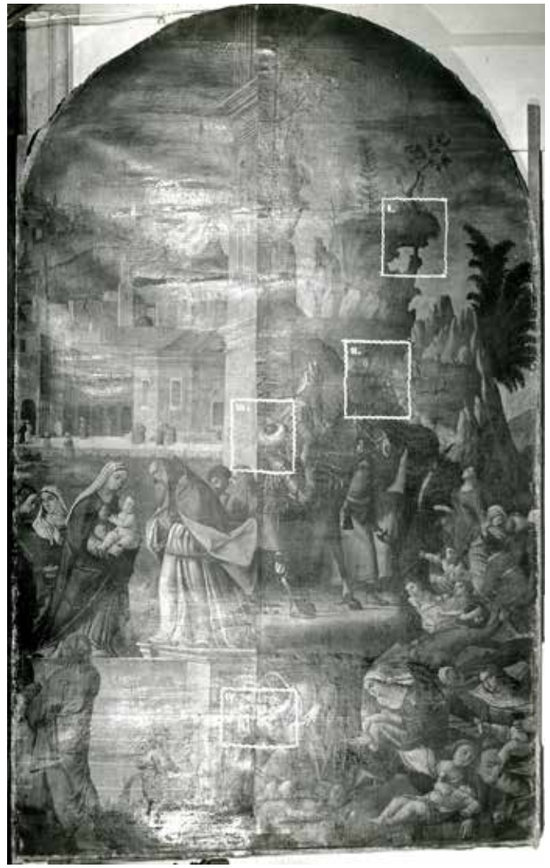
1. Optične preiskave na sliki *Pokol nedolžnih otrok* (od leve proti desni: RTG, UVF, VIS, IRF) (foto: Andrej Hirci, Sonja Fister)
1. Optical investigations of The Massacre of the Innocents (left to right: X-ray, UVF, VIS, IR) (photo: Andrej Hirci, Sonja Fister)

2. Optične preiskave na sliki P*redstavitev v templju* (od leve proti desni: RTG, UVF, VIS, IRF) (foto: Andrej Hirci, Sonja Fister)
2. Optical investigations of The Presentation of Jesus in the Temple (left to right: X-ray, UVF, VIS, IR) (photo: Andrej Hirci, Sonja Fister)

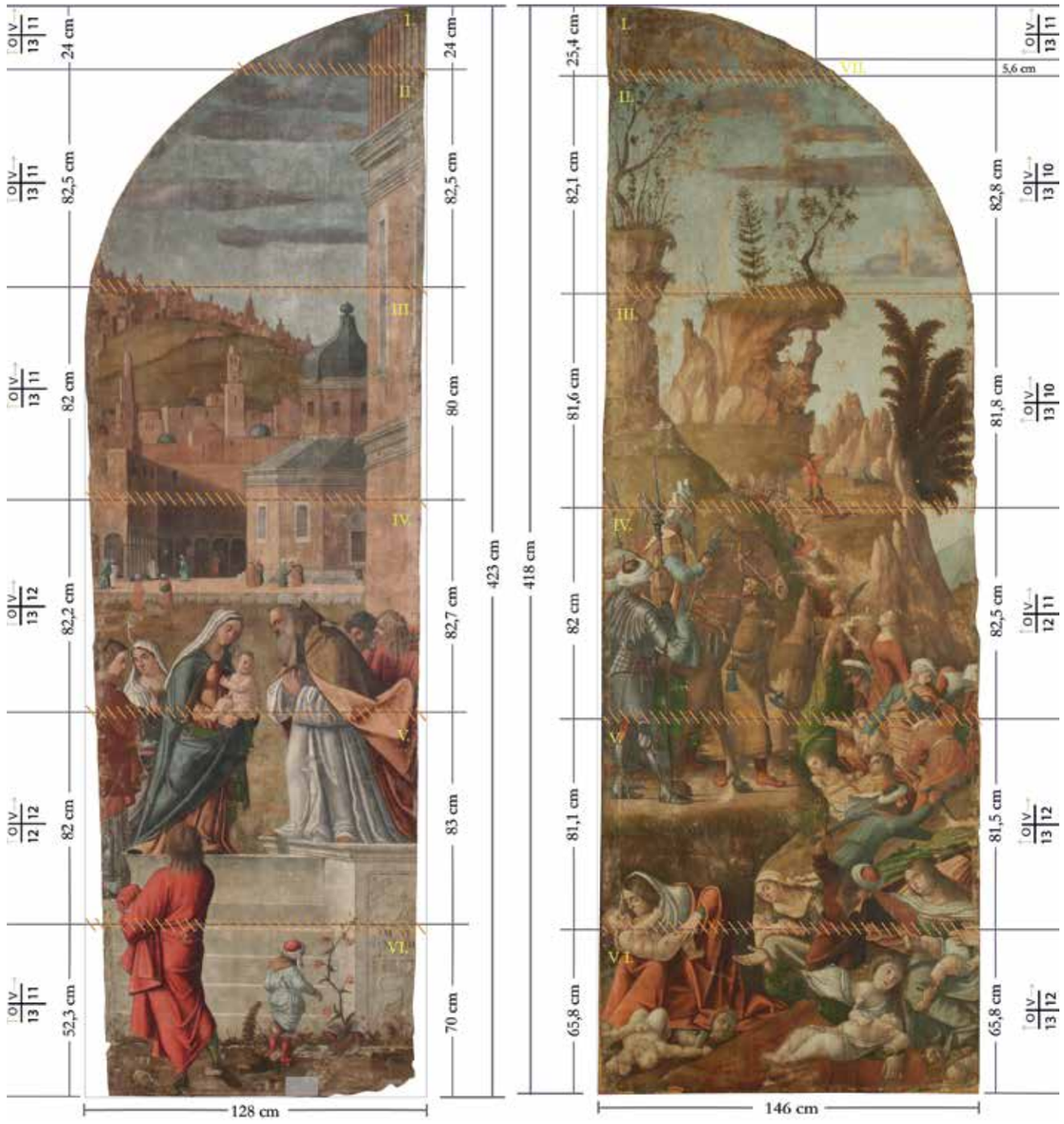


3. Fotografija slik *Predstavitev v templju* in *Pokol nedolžnih otrok* pred restavriranjem leta 1958, ko sta bili še združeni v enoten format. Zarisani kvadrati kažejo lokacije za izvedbo rentgenske radiografije (vir: MK INDOK center).
3. Photograph of The Presentation of Jesus in the Temple and The Massacre of the Innocents before the 1958 restoration, when they were still combined in a single format. The squares denote the locations for X-ray radiography (source: Ministry of Culture INDOK Centre).

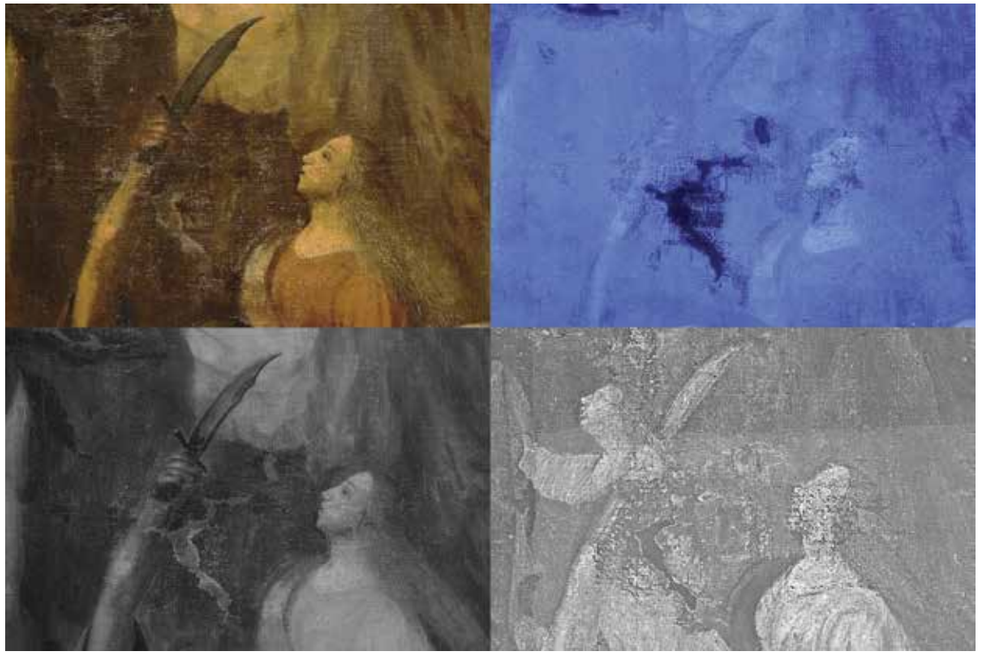
4. Arhivska fotografija z leta 1958; privihana raztrganina na stiku obeh platen priča, da je bila slika *Predstavitev* prilepljena na sliko *Pokol* (vir: MK INDOK center).
4. Archival photograph from 1958; the torn and twisted edge at the joint of the two canvases confirms that the Presentation was pasted onto the Massacre (source: Ministry of Culture INDOK Centre).

5. Odstranjevanje sekundarnega nosilca (foto: Liza Lampič)
5. Removal of the secondary support (photo: Liza Lampič)

6. *Predstavitev v templju*, detajl; neenakomerna debelina osnovne in votkovne preje se močno odraža na licu obeh slik (foto: Zoja Bajdè).
6. The Presentation, detail; the uneven thickness of the warp and weft threads is strongly reflected in the surface of both paintings (photo: Zoja Bajdè).



7. Prikaz sešitih kosov originalnih nosilcev slik *Predstavitev v templju* in *Pokol nedolžnih otrok* s povprečnim številom osnovnih in votkovnih niti (grafični prikaz: Zoja Bajdè, Emina Frljak Gašparovič)
7. The sewn strips forming the original supports of the Presentation and the Massacre with the average thread density in warp (o) and weft (v) (graphic: Zoja Bajdè, Emina Frljak Gašparovič)



8. *Pokol nedolžnih otrok*; primerjava detajla (VIS, UV, IRF in RTG) (foto: Andrej Hirci, Sonja Fister)
8. The Massacre of the Innocents; detail comparison (VIS, UV, IR and X-ray) (photo: Andrej Hirci, Sonja Fister)

9. *Pokol nedolžnih otrok*, detajl; stanje originalnih slikovnih slojev (foto: Emina Frljak Gašparovič)
9. The Massacre of the Innocents, detail; condition of the original pictorial layers (photo: Emina Frljak Gašparovič)

10. *Predstavitev v templju*, detajl; različna intenziteta retuš in preslikav pri UV-osvetlitvi priča o posegih iz različnih časovnih obdobij (foto: Zoja Bajdè in Andreja Ravnikar).
10. The Presentation, detail; the different intensities of retouches and overpaints under UV light are indicative of several separate interventions in the past (photo: Zoja Bajdè in Andreja Ravnikar).

11. *Pokol nedolžnih otrok*, detajl; sondiranje zaščitnih slojev (foto: Emina Frljak Gašparovič)
11. The Massacre, detail; sampling of protective layers (photo: Emina Frljak Gašparovič)

12. *Predstavitev v templju*, detajl; odstranjevanje porumenelega laka v vidni in UV-svetlobi (foto: Zoja Bajdè, Andreja Ravnikar)
12. The Presentation, detail; removal of yellowed varnish under visible and UV light (photo: Zoja Bajdè, Andreja Ravnikar)

13. Konservatorke-restavratorke pri delu (foto: Emina Frljak Gašparovič)
13. Conservator-restorers at work (photo: Emina Frljak Gašparovič)

14. *Pokol nedolžnih otrok*, detajl; odstranjevanje ostankov laka in nečistoče z voščenim milom (foto: Emina Frljak Gašparovič)
14. The Massacre, detail; removal of varnish residues and impurities with wax soap (photo: Emina Frljak Gašparovič)

15. *Predstavitev v templju*, detajl; odstranitev temne preslikave je razkrila živo zeleno podlogo Marijinega ogrinjala (foto: Andreja Ravnikar).
15. The Presentation, detail; removal of the dark overpaint revealed the vivid green lining of Mary's mantle (photo: Andreja Ravnikar).

16. *Pokol nedolžnih otrok*, detajl; pod obsežno rjavo preslikavo se je skrival dobro ohranjen ženski profil (foto: Emina Frljak Gašparovič, Liza Lampič).
16. The Massacre, detail; a well-preserved female profile was hidden underneath the extensive brown painting (photo: Emina Frljak Gašparovič, Liza Lampič).

17. Odstranjevanje zaščite lica slike (foto: Emina Frljak Gašparovič)
17. Removal of the temporary surface protection (photo: Emina Frljak Gašparovič)

18. Dopolnjevanje manjkajočih delov nosilca (foto: Emina Frljak Gašparovič)
18. Repairing the losses in the support (photo: Emina Frljak Gašparovič)

19. *Pokol nedolžnih otrok*, detajl; vtiskovanje teksture v zglajeno površino kita (foto: Sanela Hodžić)
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20. The Massacre, detail; simulating the thickened and strongly pronounced weaving threads (photo: Sanela Hodžić)

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21. The Massacre, detail; after texturing the infilled areas (photo: Emina Frljak Gašparovič)

22. *Pokol nedolžnih otrok*, detajl; podlaganje in finalizacija retuše (foto: Emina Frljak Gašparovič)
22. The Massacre, detail; underpainting and finishing the retouching (photo: Emina Frljak Gašparovič)

23. *Predstavitev v templju*, detajl; podlaganje in finalizacija retuše (foto: Andreja Ravnikar, Zoja Bajdè)
23. The Presentation, detail; underpainting and finishing the retouching (photo: Andreja Ravnikar, Zoja Bajdè)

24. *Pokol nedolžnih otrok*, detajl; rekonstrukcija manjkajočega dela kompozicije (foto: Emina Frljak Gašparovič)
24. The Massacre, detail; reconstruction of the missing part of the composition (photo: Emina Frljak Gašparovič)

25. *Predstavitev v templju*, detajl; rekonstrukcija manjkajočega dela kompozicije (foto: Andreja Ravnikar)
25. The Presentation, detail; reconstruction of the missing part of the composition (photo: Andreja Ravnikar)

26. Slika *Predstavitev v templju* po zaključenem konserviranju in restavriranju (foto: Barbka Gosar Hirci)
26. The Presentation of Jesus in the Temple after the completion of conservation and restoration works (photo: Barbka Gosar Hirci)

27. Slika *Pokol nedolžnih otrok* po zaključenem konserviranju in restavriranju (foto: Barbka Gosar Hirci)
27. The Massacre of the Innocents after the completion of conservation and restoration works (photo: Barbka Gosar Hirci)

28. Ekipa Restavratorskega centra po montaži (od leve proti desni: Jaka Jaklič, Sanela Hodžić, Zoja Bajdè, Barbka Gosar Hirci, Liza Lampič, Andreja Ravnikar, Emina Frljak Gašparovič, Janez Kraljič, Franci Novak, Marko Brisenhorn in Janez Novak).
28. Restoration Centre team after the installation (from left to right: Jaka Jaklič, Sanela Hodžić, Zoja Bajdè, Barbka Gosar Hirci, Liza Lampič, Andreja Ravnikar, Emina Frljak Gašparovič, Janez Kraljič, Franci Novak, Marko Brisenhorn and Janez Novak).

Zoja Bajdè, Emina Frljak Gašparovič, Barbka Gosar Hirci, Sanela Hodžić, Liza Lampič, Andreja Ravnikar

Conservation-restoration interventions on the paintings *The Massacre of the Innocents* and *The Presentation of Jesus in the Temple* by the Venetian Master Vittore Carpaccio

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Abstract

The Carpaccio project that ran between 2015 and 2018 brought together various disciplines, enabling us to gain a better understanding of cultural heritage and its preservation. Research into the painting technology employed by the author, identification of earlier conservation-restoration interventions, the condition of the paintings and the storage environment, were the foundations for planning and successfully preserving the paintings *The Massacre of the Innocents* and *The Presentation of Jesus in the Temple*, created in 1523 by the Venetian Renaissance master Vittore Carpaccio, which adorned the Cathedral of the Assumption of Mary in Koper.

Summary

An important part of the multi-year conservation-restoration project Carpaccio are the paintings *The Massacre of the Innocents* and *The Presentation of Jesus in the Temple*, created in 1523 by the Venetian Renaissance master Vittore Carpaccio, which adorned the monumental organ shutters in the Cathedral of the Assumption of Mary in Koper. Due to its national importance, the project has been part of the regular programmes of the Restoration Centre of the Institute for the Protection of Cultural Heritage of Slovenia since 2015, and is supported by the Ministry of Culture of the Republic of Slovenia. The first stage of the demanding project involved documenting the condition of the paintings, understanding the painting technology employed and analysing earlier conservation-restoration interventions. The project included an international team of experts who collaborated with Slovenian researchers to successfully identify most of the materials used. Scientific investigations carried out in different time frames deter-

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mined the various varnishes, pigments, binders and fillers. On the basis of data obtained by reviewing preserved documentation, and by taking into account the condition of the paintings, the earlier interventions, the results of scientific investigations, and the conditions of preservation, a complex programme of conservation-restoration work was prepared and carried to completion in 2018 with the installation of paintings in the Koper Cathedral – a space deeply marked by the two paintings that have stood there for half a millennium.

Introduction

The Carpaccio conservation-restoration project initially included the paintings *The Massacre of the Innocents* (hereinafter the *Massacre*) and *The Presentation of Jesus in the Temple* (hereinafter the *Presentation*), and was later expanded to include Benedetto Carpaccio's *Madonna with Child on the Throne and Two Saints*, as well as Vittore Carpaccio's *Madonna with Child on the Throne and Six Saints* as the most representative of the paintings involved.[1]

Of the original four organ shutter paintings, only two have been preserved in the Cathedral, both depicting scenes from the early childhood of Jesus. The year 1523 is visible in the *Presentation*, which places the paintings in Carpaccio's late creative period – in fact, they are his last known works.

As the paintings constitute nationally important artistic heritage, the project was included in the regular programmes of the Restoration Centre of the Institute for the Protection of Cultural Heritage of Slovenia (IPHCS) in 2015, and was financially supported by the Ministry of Culture of the Republic of Slovenia.[2]

The first stage of the extensive and complex project involved documenting the condition of the *Massacre* and *Presentation* paintings, understanding the painting technology employed and identifying earlier conservation-restoration interventions. The project included an international team of experts[3] who helped us identify most of the material components. The research part of the project was selected in the 2010 international call of the MOLAB mobile laboratory within the EU CHARISMA project and received funding from the European Commission. We carried out scientific investigations to identify the various varnishes, pigments, binders and fillers. We also obtained important information for selecting the right materials and testing the removal of surface impurities, wax coating, and non-original varnishes. While the analysis of the results allowed us to determine the most suitable methodology, the need to upgrade it became apparent during the execution. Non-invasive investigations yielded important information, but invasive stratigraphy was also needed to obtain a larger scope of data. The Slovenian team of experts applied optical microscopy, Raman microspectroscopy, Fourier-transform infrared spectroscopy, X-ray radiography, and multispectral analysis[4] to qualitatively supplement and improve the data on the material composition of Vittore's paintings (Figures 1 and 2). The paintings have undergone several restorations in the past, as evidenced by the photographs from 1906, as well as records from the meetings of an expert committee in 1958, 1959 and 1961, which detail the decisions on the interventions to be carried out and their subsequent results.[5] The results of scientific investigations, the condition of the artworks, and the storage environment conditions were the guiding principles in considering, preparing, and executing the complex conservation-restoration programme described below.[6]

Conservation-restoration interventions between 1958 and 1961

The paintings have been conserved and restored at least twice in the past (Sitar, 2015: 30). As a photograph from 1906 shows, the two artworks that are completely incompatible in their motifs were combined into one and placed in a decorative frame.[7] After we inspected the condition of the paintings and analysed the photographic material from 1958 (Figure 3), we found that the *Presentation* was pasted onto the *Massacre* (Figure 4). The combined paintings were likely also lined to a second canvas, as this was an established procedure for preserving weathered or damaged textile supports from the 17th century onward (Kirsh, Levenson, 2000: 35). It is not known who carried out this conservation-restoration intervention or when – there may be records of this in the Italian archives, which are unfortunately difficult to access.

The last conservation-restoration procedures could be reconstructed on the basis of the committee meeting records dating from 1958 to 1961, when the restoration department of the Institute for Monument Protection of the then People's Republic of Slovenia carried out the interventions in accordance with the decisions of the expert committee.[8] Records from three meetings of the committee have been preserved, detailing the decisions on the conservation-restoration interventions to be carried out and their subsequent results. The records concern several paintings: *The Massacre of the Innocents, The Presentation of Jesus in the Temple, Madonna with Child on the Throne and Six Saints* by Vittore Carpaccio, *Madonna with Child on the Throne and Two Saints* by Benedetto Carpaccio, and a Venetian school painting by an unknown author entitled *The Last Supper*. The records of the meeting of 11 February 1958 indicate that all the paintings should be examined in full by means of natural light and infrared photography, ultraviolet fluorescence photography, X-ray photography and chemical analysis. The committee decided that the committee chair and the then head of restoration department, Professor Mirko Šubic, and the engineer Boris Fakin were to prepare the programme for the conservation of paintings, before the committee would reassemble and determine the extent of the restoration. The most important decision was to separate the paintings. The records dated 27 March 1959 again mention separating the paintings, preserving the varnish layers, conservation, glue lining, filling, retouching and new varnishing. The decision on the size of the new stretchers was left to the committee chair. In the records of a meeting held after the interventions, dated 21 January 1961, the committee had established that the *Massacre* and *Presentation* had been conserved and restored in accordance with the programme, and that appropriate results had been achieved. An idea to add new dark decorative frames with a gold insert was also suggested, but not realised, and the possibility of moving the paintings to a new location in the Koper Cathedral was also mentioned.

In addition to the limited records of the committee meetings, notes concerning the methodology of conservation and restoration of canvas paintings, carefully compiled by our colleague Miha Pirnat Sr, were also of great help.[9] These notes helped us to reconstruct the earlier conservation-restoration interventions that were carried out on the paintings. The paintings were separated and presented as independent works in the size of 421 × 147 cm. They were glued by hand with a wax-resin adhesive (Kavkler, 2016: 5), which was a novelty in Slovenia at that time.[10] Because of the similarity of climate conditions in Slovenia to those in north-western Europe, our restorers followed their Belgian colleagues, who have experience in using the wax-resin adhesive for conserving and restoring valuable Dutch paintings (Demšar, 1972: 39). For the lining they used an industrially produced canvas with a width of 140 cm, which was sewn from two pieces for the *Massacre*, and from four for the *Presentation*. The dimensions of the lining canvas for the *Presentation* were 433 × 160–163 cm and 425 × 153 cm for the *Massacre*. In two places the painted edge of the *Presentation* and the protective matting were additionally sewn to the lining fabric. The remains of a harder coating found during the interventions suggest that the backs of both paintings were also impregnated before lining.[11] When removing the lining canvases (Figure 5), we found that the cut seams of the original supports were pasted over with two layers of so-called Japanese paper.[12] They used a similar approach to consolidate the damaged edges and tears in the lower part of the *Presentation*. Two larger losses in the original support of the *Massacre* were repaired with canvas inserts and filled, and a larger area around the damage was overpainted.

Due to the lack of preserved documentation, it is impossible to know what happened to the paintings between the time the organ was demolished and the time the paintings were combined into a single artwork. The fact is that the original format dimensions are lost forever. Our predecessors were also aware of this, so they tried to unify the different formats of the paintings by using stretchers of equal size. As the original canvases with half arch tops were presented on rectangular formats, and because of the irregular edges resulting from the past cropping of the paintings, parts of the secondary support remained exposed. These areas were pasted and protected with a decorative matting made of several pieces of canvas and painted a neutral grey.

1 The conservation-restoration interventions within the Carpaccio project were carried out by Zoja Bajdè, Emina Frljak Gašparovič, Barbka Gosar Hirci, Sanela Hodžić, Liza Lampič and Andreja Ravnikar.

2 Jernej Hudolin, Head of the IPHCS Restoration Centre, and the conservators responsible from the Piran Regional Unit of the IPCHS: Jure Bernik and Mojca Marjana Kovač.

3 Participants in the MOLAB research project: from the Research Institute of the IPCHS Conservation Centre: Polonca Ropret; from the University of Perugia and the SMAArt Institute: Constanza Miliani, Francesca Rosi, Paola Rocchi, Chiara Anselmi, Chiara Grazia and Anna Amat; from the Art Diagnostic Group at CNR-INO Istituto Nazionale di Ottica in Florence: Claudia Daffara and Marco Barucci; from the Centre de Recherche et des Restauration des Musées de France, Paris du Louvre: Jacques Casting, Helene Rousseliere and Alessandra Gianoncelli.

4 From the Department for Natural Science Research at the IPCHS Restoration Centre: Katja Kavkler, Petra Bešlagić, Sonja Fister; from the Research Institute of the IPCHS Conservation Centre: Lea Legan, Klara Retko and Maša Kavčič; from the National Gallery: Andrej Hirci.

5 The archive material was found by Mateja Neža Sitar, IPCHS Restoration Centre.

6 Conservation-restoration interventions were supervised by an expert committee comprising: Višnja Bralić, Croatian Conservation Institute; Luca Caburlotto, Polo Museale del Friuli Venezia Giulia; Jurij Dobravec, Ars Organi Sloveniae; Edvilijo Gardina, Koper Regional Museum; Mira Ličen Krmpotić, independent cultural worker; Ferdinand Šerbelj and Simona Škorja, National Gallery.

7 Source: Fondazione Federico Zeri.

8 The committee comprised Izidor Cankar, Boris Fakin, Božidar Jakac, Gojmir Anton Kos, France Mihelič, Miha Pirnat Sr, France Stele, Mirko Šubic, Marijan Zadnikar and Miha Železnik.

9 In addition to Miha Pirnat Sr, the Institute at that time employed the academy-trained painters Tomaž Kvas and Emil Pohl, restorer Anton Demšar, and assistant Adela Demšar. The extent of their involvement in conservation-restoration interventions is not known.

10 The notes of Miha Pirnat Sr include a recipe for the wax-resin adhesive. It was prepared from five parts bleached beeswax, one part rosin, and one part Venetian turpentine.

11 Pirnat's manuscript gives the following instructions: "Wax for consolidating paintings (back side) 70% wax, 30% dammar."; "Emulsion for impregnating the back of the painting before rentoilage (relining): cellulose (approx. 2 parts, alkyd resin (approx. 1 part), rosin wax (quantity dependant on the state of the painting), a small amount of zinc glue. If the decay of the painting is severe, a little linseed oil is added, which makes the painting more supple. /... / The consistency of this emulsion should be that of mayonnaise. If necessary, a little turpentine is added."

12 According to Miha Pirnat Sr, the term Japan paper/Japanese paper was generally used for a type of thin paper purchased at the Medvode pulp mill, while his notes from 1966 also include the term "silk paper".

Condition of the paintings

Condition of the supports and stretchers

The strong shipbuilding industry and the maritime interests of the Venetian Republic ensured that fabrics were easily accessible during the Renaissance (Matthew, 2002: 685). In addition to plain weave fabrics, Carpaccio used fabrics with a twill weave and its broken twill weave variation, also known as herringbone. Plain weave fabrics are the strongest of these, and are also sufficiently rigid due to their uniform structure and dimensional stability (Bajdè, 2016: 197), thus making them the best choice for woven canvas supports.

For both paintings, Carpaccio used a plain weave linen fabric (Kavkler, 2019: 7–8) with an average thread density of 13/11 per cm–1 in warp and weft. The hand-spun warp and weft yarns are single ply and spun to the right. In some areas, the warp and weft threads are much thicker, which results in the highly textured surface of both paintings (Figure 6).

The original support of the *Presentation* measures 423 × 128 cm, while that of the *Massacre* measures 418 × 146 cm. As the paintings are large format, their supports are made of several strips of fabric of the same type, which are 80 cm wide and comparable to the preserved painting supports from the period of the Venetian Republic (Yang, 1998: 179). The support of the *Presentation* consists of six pieces, while that of the *Massacre* of seven pieces (Figure 7). At that time the sewing of fabrics could be provided by the supplier (Dunkerton, Spring, 2013: 10) or done in a painter's workshop. For the paintings in question, there is every indication that the fabric was cut, assembled, and sewn by a trained hand who knew and took into account the mechanical properties of the textile. The strips were sewn together horizontally and in a consistent manner, piece by piece, so that the warp and weft threads run in the same direction. The seams are visible on the face of both paintings. During the interventions we found that stitching was damaged in some places. The sewing threads were broken, the ends were frayed, fibres protruded from the yarn, and some of the threads were even missing, suggesting that stitches on the backs of the paintings were cut. Cutting or levelling of protruding seams was a common practice when preparing paintings for lining. Its purpose was to avoid the impression of seams showing on the face of the paintings and to create a flat surface that was easier to work with.

The *Presentation* and *Massacre* have not been preserved in their original sizes, as they are cropped on all sides. When the paintings were combined into a single format, the *Presentation*, the left side of which is diagonally cropped, was aligned with the right edge of the *Massacre*. If we compare their sizes, both original supports must have been slightly larger, but certainly of the same dimensions, assuming that the paintings constituted the workday and festive sides of the right organ shutter (Brejc, 1983: 26). The secondary supports provided an adequate base for the badly weakened original supports and provided stability to the pictorial layers. The paintings were adequately mounted to the stretchers and held at an appropriate tension. Older damage was visible in some places on the edges. The holes and perforations were caused by the use of nails to attach the paintings to the stretchers, while other damage that had been repaired previously was due to the natural weathering of the canvas – the photooxidation of cellulose, chemical reactions with painting materials and various mechanical factors. The central part of the *Massacre* had two larger losses that were repaired in the past with canvas inserts and filled, and a larger area around the damage was overpainted. Two areas of line-shaped canvas damage with losses of the pictorial layers were also visible in the *Presentation*.

During the last conservation-restoration intervention in 1959, the paintings were mounted on wooden wedged stretchers with supporting cross braces. Such stretchers have been commonly used since the 19th century, and are still adequate for the basic protection of artworks. The wood was sufficiently matured and did not bend. All the wedges were in place. The stretcher bars had a raised lip. Upon inspecting both stretchers, we found that they were originally smaller and were subsequently enlarged. While the reason for this enlargement is not known, it can be argued on the basis of otherwise limited data on earlier interventions that our predecessors were aware of the importance of Renaissance artworks and employed conservation-restoration methods that were established at the time.

Condition of the pictorial layers

Assessing the condition of the pictorial layers prior to an intervention is a challenge for any conservator-restorer, especially if the painting in question has undergone several restorations and the original is covered by thick varnish, retouching and even overpaint layers. While hidden layers can be analysed using optical investigation methods (Figures 1 and 2), without which conservation-restoration work is difficult to imagine now, the actual state of an artwork can only by revealed by physical intervention.

As noted above, the *Presentation* and *Massacre* have been restored several times since their creation. The distinctly dark and yellowish surface of the paintings confirmed that the pictorial layers were covered with thick applications of old varnish and dirt that obscured the depicted scenes, colour transitions and details, completely altering the bright palette characteristic of the author's work. The protruding horizontal seams joining the individual strips of the supports remained well visible, as was the pronounced surface structure of the weaving of the support fabric, which indicates extremely thin applications of the original pictorial layers. The ground could not be seen even in the areas of significant mechanical damage. Concrete data was only obtained by conducting scientific investigations. Optical microscopy of sample cross-sections in visible and ultraviolet light confirmed the presence of an insulating layer or the ground. Identification of individual components determined the presence of calcium sulfate dihydrate and proteins (Kavkler, 2016: 7–14), which leads to the conclusion that the author used a traditional ground made of a mixture of animal-hide glue and finely ground Bologna chalk for the insulation layer. This type of ground, called *gesso sottile*, is characteristic of medieval and Renaissance painting in the Venetian region (Stols-Witlox, Ormsby, Gottsegen, 2012: 163). Following this preparation, the author painted both scenes in thin applications, using the glazing technique in some places. Although individual details were emphasised with thicker applications, the colour layer can be considered as extremely thin. The following pigments were identified by various analytical methods (Ropret, Legan, Rare, 2011: 5, 47–52). Red lead (minium) and cinnabar predominate in the red areas. In areas with high iron concentrations (red tones in particular), pigments could not be identified by analysis. These are most likely earth pigments, red clays, which are characteristic of the master's palette. Among the yellow pigments, we have identified orpiment, lead tin yellow, and natural yellow ochre. Among the green pigments was paratacamite, while one of the green samples could not be identified. One element identified was copper, which suggests the copper-based pigment verdigris. Most of the greenery depicted in the painting has turned completely brown, which is characteristic of verdigris, an otherwise intense green pigment that turns brown, sometimes even black, due to its instability and reactivity over the years. Among the blue pigments, smalt and azurite were identified. The black areas are painted with charcoal black, while the depictions of armour and other metallic details the *Massacre* contain stibnite. As the latter is characterised by a metallic lustre, it is no coincidence that Carpaccio used it to depict metallic elements. White lead, calcium sulphate dihydrate (gypsum), calcite, quartz, and huntite (in one case only) were also identified. The presence of plattnerite, a black lead oxide, is probably due to the degradation of white lead or red lead pigments. Analysis of pigment binder composition did not yield clear results, as the paintings were fully impregnated with wax-resin during the earlier lining process. The binder likely consists of tempera, egg tempera, perhaps even fatty egg tempera, but the presence of oils was difficult to prove.

The removal of the top layers of impurities, darkened protective layers, overpaints, and retouches revealed the characteristic bright palette of the Venetian master, as well as the unfortunate fact that the paint layer is in a worse state than initially assumed. We found older, more stubborn retouches under the varnish, as well as several overpaints. Among the more prominent ones was the overpaint in the central part of the *Massacre* covering two areas of significant damage to the woven support that had been repaired. Damaged areas were covered with brown paint, which was also used to overpaint a good part of the adjacent original painting; among others, a well-preserved and subtly painted female profile (Figure 8). In the *Presentation*, the overpaint on the leg of the foreground male figure in red drapery was especially noticeable. Fragments of the figure's original green footwear were preserved underneath the brown overpaint. A detailed examination of both paintings showed tiny cracks in the pictorial layers, which spread unevenly over the entire surface of both paintings. These cracks were more pronounced near the areas of mechanical damage. The paint layer was otherwise stable, which can also be attributed to the lining with the wax--resin adhesive that impregnated the paint layer and the ground in addition to the canvases. Nonetheless, the state of the original layers cannot be considered good due to the extent of damage (Figure 9). In contrast, there was noticeable surface abrasion and in some places the paint on the tops of the weft threads was worn all the way down to the ground. These areas, too, have mostly been overpainted in the past, as this was much easier and faster than retouching countless minor losses, as we later experienced first-hand.

Damage to the pictorial layers was apparent on the entire surface of the painting, and was the most extensive at the edges, as both paintings have in the past been trimmed, then mounted to the stretchers with a great number of nails driven right into the original painting. Due to the sagging of the fabric, and most likely also due to the frequent opening and closing of the organ shutters, the lower edges of the paintings were also badly damaged. In the *Massacre*, we noticed an unusual brighter band that was 8 cm wide and ran along the entire left vertical edge of the painting. The width of the band was not uniform because the edge of the painting was cut unevenly, that is, the edge was slanted to the right towards the top. This brighter edge was the result of the two organ paintings having been combined into a single format. This intervention was completed with the application of protective varnish, thus the band covered by the right edge of the *Presentation* remained unvarnished and consequently brighter. Equally unusual was the darker coloured band on the right edge of the *Presentation*, which was about 10 cm wide at the top of the painting and tapered in a triangular shape reaching the middle of the right edge of the painting. The paint layer on this band was badly damaged and fragments of non-original paint were also visible. A detailed investigation led to an interesting conclusion. When the paintings were combined into a single format, this area was overpainted in order to optically merge the two completely different scenes. The overpaint was most likely removed during the last intervention in the 1960s, although the preserved records make no mention of this.

Conservation and restoration between 2015 and 2018

Removal of old protective layers, retouches and overpaints

Examination of the paintings showed several layers of old protective coatings, which had darkened considerably in the years since their application. The intense greenish fluorescence under ultraviolet light indicated the presence of natural resin varnishes. Old retouches and overpaints were visible as dark spots that differed in intensity and sharpness of the edges, proving that they were applied during at least two separate interventions in the past (Figure 10). Stratigraphy of the samples that was taken in several areas of the pictorial layer, and their examination under ultraviolet light, showed the presence of three different protective coatings (Gosar Hirci, Ropret, Retko, Bajdè, Legan, 2012: 26). The exact composition and origin of the individual protective layers could not be determined due to the materials added during the previous conservation-restoration interventions.

In order to determine the most suitable means for the removal of non-original protective and paint layers, we first took samples from the *Presentation*. The identical painting technology employed in both paintings, as well as their condition and storage environment, enabled us to use the same methods and materials for the *Massacre*. We first removed the surface impurities, wax paste, resin-based varnishes, and finally the oil retouches and overpaints. Sampling and removal of non-original layers were carried out in phases, and progress was constantly monitored under ultraviolet light (Figures 11 in 12).

Since the last conservation-restoration interventions, a significant amount of dust particles and other substances have accumulated on the surfaces of the paintings, forming both unbound and bound impurities. Unbound impurities were removed from the surface of the paintings by brushing and suction. Before the removal of non-original layers, testing of the solubility of surface impurities and varnishes was carried out on both paintings as part of the MOLAB research. Artificial saliva was tested for the removal of bound surface impurities;[13] outside the scope of the research, distilled water was later tested as well. Both agents showed comparable results, so we decided to use distilled water and thus avoid introducing new materials into the painting where not necessary. Non-invasive investigations (near- and mid-infrared spectroscopy – nIR and mIR) showed, among other things, the presence of lipids on the surfaces of the paintings (Ropret, Legan, Retko, 2011), in both cleaned and uncleaned areas. Based on experience and analysis of earlier interventions, we concluded that we are dealing with traces of wax. There are various possible reasons for its presence. It may have been the remnants of a wax-resin lining adhesive or a layer of wax paste (Pirnat, 1966, 2015) that the conservator-restorers applied to the dammar varnish to reduce its gloss. Since the wax layer was even and brush strokes were visible in places, we surmise that a thin layer of wax paste was applied to the surface. We removed it with white spirit. Mid-infrared spectroscopy measurements still showed the presence of lipids after the removal of the aforementioned layer (Ropret, Legan, Retko, 2011a, 2011b). Given that the paintings were lined with wax-resin adhesive, it was not possible to determine whether the wax paste was completely removed. Since the pictorial layers on both paintings are extremely thin, the wax-resin adhesive most likely penetrated into the surface of the painting during the removal.

This was followed by the testing of various substances to remove degraded resin varnishes. As part of the MOLAB project, various methods were tested with non-invasive point measurements, and the most appropriate one was determined by analysing the results achieved (Gosar Hirci, Ropret, Retko, Bajdè, Legan, 2012: 26). We tested isooctane and ethanol (IE) blends in different volume ratios: IE2 (80 : 20), IE4 (60 : 40) and IE6 (40 : 60). Based on the measurements, the solvent mixture IE4 was selected, which did not affect the composition of the underlying pictorial layers (Ropret, Legan, Retko, 2011). During the work it turned out that mixture IE6 was more effective due to its faster action, while mixture IE4 was used on sensitive areas. These were the red and green tones in the *Presentation*, and the reddish-brown ones in the *Massacre*. Along with the varnish, we also removed most of the inadequate recent retouches, which were most likely carried out in 1959 (Figure 13). The removal of the varnish revealed that the damage to the pictorial layer was more extensive than initially appeared. It also became apparent that a layer of impurities and varnish residues was still present on the surface, obscuring the vibrant Renaissance colours. The appearance of the painting was also marred by a considerable number of earlier retouches and overpaints. Unfortunately, their age could not be determined by analysis, although the stubbornness of the retouches and overpaints indicated that they were likely of an older date. Due to the lack of documentation, we can only guess whether this was when the paintings were combined into a single format.

After the removal of the recent varnish layer, testing of solvent mixtures for the removal of old darkened varnish residues and impurities was again performed. We re-examined the effect of buffer solutions. We tested solutions with pH values of 7.1[14] and 8.6[15] (Cremonesi, 2015), which were mostly ineffective. An effect was observed with a buffer solution with a higher pH, but unfortunately it was not satisfactory. Wax soap with pH values between 8.2 and 8.7,[16] which was applied either directly to the surface or via a thin layer of special Lens Tissue L2 paper, which acted as a protective interface, proved to be more effective. The effect of the wax soap using the interface was more even compared to direct surface application. In addition, the paper sheets acted as a blotter, and their colouration enabled us to control the duration of solvent action. They turned yellowish after only a few seconds, which confirmed the effectiveness of the solvent (Figure 14). We also used the sheets to remove a large part of the dissolved varnish residues and most of the wax soap. The remaining soap was removed with dry cotton swabs and finally with swabs moistened with distilled water. Once the surface was dry, we removed the waxy component of the soap, which had the appearance of a greyish film, with swabs lightly soaked in white spirit. This procedure was carried out with extreme care, and we followed the shapes of the coloured surfaces. We avoided applying soap in a rectangular manner, as this could leave an undesirable pattern. Where the uniformly coloured surfaces were too large to allow us to follow the painted shapes in a controlled manner, we proceeded by carefully cleaning smaller areas where safe removal and control of the treated area could be ensured. The number of wax soap applications varied depending on the structure of the surface and the thickness of the non-original layer.

A significant portion of the overpaints was also removed during the removal of the oldest varnish residues, although their complete removal required another adjustment to the methodology. We tested the following solvent mixtures: isooctane and acetone IA2 (80: 20) and IA8 (20: 80), acetone and ethanol AE2 (80: 20) and AE8 (20: 80), and isooctane and ethanol IE2 (80: 20). None of them were effective. This was followed by testing of solvents and their mixtures in the condensed phase, which allows for longer operation and reduces the penetration of solvents into the painting. We tested ethanol gel,[17] isooctane and ethanol gel IE1,[18] white spirit and benzyl alcohol gel[19], and acetone and benzyl alcohol gel[20] (Cremonesi, 2015). An effect was only observed in the gel made from a mixture of acetone and benzyl alcohol, which dissolved the more recent retouches, but did not work on the earliest overpaints. The latter were tested against a range of traditional solvents with ammonia: 2A, 3A, and 4A[21] (Cremonesi, 2015), which were also ineffective. Lastly, we tested mixtures in the condensed phase, which start a chemical reaction due to the presence of very strong solvents and are not recommended in high concentrations. While butyl acetate/DMF gel[22] proved to be very effective, dimethyl formamide (DMF) is extremely toxic, so the use of dimethyl sulfoxide (DMSO) is preferable. Butyl acetate/DMSO gel[23] (Cremonesi, 2015) showed comparable results, so it was decided to use it. The gel was applied exclusively to the overpaint areas and left to act for about 30 to 60 seconds, depending on the thickness of the non-original layer. The overpaints were softened to the point where they could be removed with a cotton swab (Figure 15). In places where the overpaint was thicker, the gel-softened paint was removed mechanically. In areas where the overpaint was particularly stubborn, the surface was wetted with butyl acetate. Solvent action was stopped by the addition of acetone and the treated surface was neutralised with white spirit after it had dried. Due to the aggressive action of butyl acetate, some of the overpaints in the damaged areas were only thinned down, and were later colour-matched to the adjacent areas during the retouching process.

The biggest surprise was hidden underneath a larger overpaint in the central part of the *Massacre* – a portrait of a woman in profile (Figure 16). The pictorial layer and the support were badly damaged in this area of the painting. In addition to the well-preserved portrait, smaller fragments of the original colour layer were also present here. Our predecessors covered the entire damaged area in a uniform brown tone. In the *Presentation*, the lining of Mary's mantle and the shoes of the man in the red robe, whose back is turned to the viewer, were overpainted in a thick application of black paint. Both were once in an intense green shade and were overpainted due to extensive damage. There was doubt about the origin of the yellow-red draperies, but scientific investigations did not give a definitive answer. The draperies in question are those in the clothing of the desperate mother in the lower part of the *Massacre*, and in the robe of the female figure at the left edge of the *Presentation*. As the thin applications of red over the yellow were sensitive to the solvents we used, these areas were cleaned to a limited extent. In the future, more advanced methods might become available, enabling us to determine the origin of these paint applications. For the time being, professional ethics dictates that we leave these areas untouched.

13 100 ml distilled water (pH 7.2), 0.1 g mucin, 0.1 g triammonium citrate.

14 150 ml distilled water, 0.72 g citric acid, a few drops of 1 molar sodium hydroxide solution.

15 50 ml citrate pH 7.1, 0.15 g boric acid, a few drops of 1 molar sodium hydroxide solution.

16 A mixture of 1 l distilled water, 100 g bleached beeswax, 40 g ammonium carbonate.

17 2 ml Ethomeen C–25, 0.5 g Carbopol Ultrez 21, 50 ml ethanol, a few drops of distilled water.

18 50 ml IE1 solvent mixture, 7 ml Ethomeen C–12, 1 g Carbopol Ultrez 21, a few drops of distilled water.

19 8 ml white spirit, 2 ml benzyl alcohol, 2.5 ml Tween 20, 0.5 g Vanzan NF–C, 50 ml buffer 8.5.

20 40 ml acetone, 12 ml benzyl alcohol, 0.5 g Carbopol Ultrez 21, 2 ml Ethomeen C–25.

21 2A is a mixture of distilled water and ammonia added drop by drop. 3A is a mixture of 1 part distilled water, 1 part acetone, 1 part ethanol. 4A is a mixture of 1 part distilled water, 1 part acetone, 1 part ethanol and ammonia added drop by drop.

22 25 ml butyl acetate, 25 ml DMF, 1 g Carbopol Ultrez 21, 6 ml Ethomeen C–25, water.

23 25 ml butyl acetate, 25 ml DMSO, 1 g Carbopol Ultrez 21, 8 ml Ethomeen C–25, 2 ml water.

Conservation and restoration of supports and replacement of stretchers

The conservation and restoration of the original supports was largely determined by earlier interventions, in particular the problems posed by the cut seams and lining. After removing surface dirt, non-original varnishes, retouches and overpaint layers, we removed the grey decorative matting and adhesive tape from the edges of the paintings. The paintings were lined with wax-resin adhesive and nailed to the stretchers at the edges. While removing the decorative matting from the *Presentation*, we noticed that it was sewn to the lining canvas in some places. These stitches were carefully cut and removed.

Before removing the paintings from the stretchers, removing the lining canvases and cleaning the backs, the fronts of the paintings were protected with sheets of Lens Tissue L2 and glue, which also served as a consolidant. We chose this method due to the presence of the wax-resin adhesive. We used a compatible, yet stronger and more advanced Beva 371 adhesive, which has better properties compared to the wax-resin adhesive. Sheets of special paper were affixed to the surface of the paintings in a single layer with a 5% solution of Beva 371 in white spirit. We applied two layers of paper in the areas of major damage and seams, as we already assumed that the seams on both supports had been cut and thus weakened. The purpose of this procedure was to protect the pictorial layers from mechanical damage that could occur during further conservation-restoration interventions performed on the backs of the paintings. At the same time, this protective measure allowed us to keep both supports in a single format, as they could fall apart due to the missing seams during the interventions.

The following step was to remove the paintings from the stretchers. As the canvases were impregnated with the wax-resin adhesive, the nails were easily removed. The lining canvas was peeled away from the back of the original in one piece by pulling at a sharp angle (Figure 5). Afterwards it was found that the wax-resin adhesive was unevenly applied to the backs of the paintings, so the thicker layers were first thinned down with a scalpel. Because the supports were badly degraded and brittle, great care was required during this stage of the work. We also came across an old restoration intervention rarely encountered in practice. The areas of the seams and the edges of the paintings were reinforced with Japanese paper, which we then removed together with the glue. In the *Massacre*, we used a hot air blower to heat the glue around the areas where the support had significant damage.

Wax and natural resin adhesives are acidic and alter the tone of the support, ground and paint layers, which was also noticeable in the present case. The resin components that strengthen the adhesion of the glue are more acidic than wax, thus further contributing to the deterioration of the delicate cellulose material. In order to remove as much wax and resin as possible from the paintings, the procedure was continued using a low-pressure table. As the work surface of the table was too small, we were only able to process a third of the painting at a time. We increased the work surface by placing desks of the same height along the longer side, which allowed us to safely move the painting during the process. We covered the surface of the low-pressure table with felt, which alleviated the pressure of the painting on the perforated surface of the table. We covered the felt with Hostaphan® RN 15 polyester foil, on top of which we placed six layers of absorbent paper to soak up as much wax-resin adhesive as possible. Lastly, we covered the paper layers with Hollytex polyester textile, which prevented the paintings from sticking to the paper. We placed the painting on the prepared surface face up and covered everything with Hostaphan RN 15 polyester foil. A temperature of 80 °C and a pressure of 50 kPa caused the wax-resin adhesive to melt and permeate the paper. After about 10 minutes, the heating was turned off and the painting was allowed to cool to room temperature. After the procedure, we removed the temporary protection from the surface of the paintings with Shellsol D40, while the remains of the Beva 371 consolidant were removed with Petrol 100–140 °C (Figure 17).

After removing the lining canvases and excess wax-resin adhesive, the sutured stitches, tears, punctures and weathered areas were locally repaired. As the production of yarn and fabrics is today industrialised, it is difficult to find canvases identical to the hand-woven ones. Still, we were able to approximate them quite closely. To repair the losses in the original supports, we chose a new linen canvas with a thread density of 12/12 per cm^{-1} in warp and weft. The canvas was stretched on a temporary stretcher and impregnated with two coats of 7% rabbit glue solution. We wanted to approximate the original material of the supports as closely as possible, so we decided to also apply the old wax-resin adhesive to the canvas. The impregnated new canvas was removed from the stretcher, placed on the low-pressure table, and covered with one of the old canvases removed from the backs of the originals. The table was heated to 80 °C so that the new canvas was impregnated with the old wax-resin adhesive, which is also present in the original supports. The canvas inserts processed in this manner will react and age similarly to the original supports. Before making the inserts, we placed the painting face down on the work surface and primed the edges of the damaged areas. We then placed the prepared canvas under each loss and traced its outline. A precisely cut piece of canvas was inserted into the damaged area from the back, covered with Beva 371 adhesive film, and a reinforcement made of Lens Tissue L2 paper. The adhesive film was activated with a heating spatula (Figure 18). We used a double layer of reinforcement to consolidate the seams and the badly deteriorated lower part of the support of the *Presentation*. Tiny holes, tears and punctures, which were too small for the inserts, were also covered with reinforcement, thus consolidating the area around the damage and preventing its progression. All newly added canvas inserts and support reinforcements are fully removable.

In the past, glue lining and consolidation were procedures that had a significant impact on the painting. Today we strive to use lining methods where the adhesive does not impregnate the original support and can be removed as much as possible. We lined the degraded supports using polyester canvas with a thread density of 19/19 per cm^{-1} in warp and weft, weighing 210 g/m^2 and 314 cm wide, which is less sensitive to moisture than traditional linen. The selected canvas was mounted on a temporary stretcher and impregnated twice with a Lascaux Hydro-Grund acrylic emulsion diluted with three parts water. The purpose of the impregnation was to keep the lining adhesive on the surface of the new canvas. Because the paintings contain wax-resin adhesive applied in the earlier conservation-restoration interventions, we chose the compatible Beva 371 adhesive film, thus also reducing the exposure of the paintings to high temperatures. We ironed the adhesive film onto the new canvas. The size of the applied adhesive film was matched to the size of the new stretchers (422×148 cm). We continued the lining process on the low-pressure table, which was covered with felt and Hostaphan RNT 36 polyester foil. We laid the new canvas with adhesive film onto the table then placed the painting facing up on top of it. We used strips of canvas to facilitate the air exhaust. The face of the painting was covered with Hostaphan RNT 36 polyester foil, which prevented sticking to the thinner Hostaphan RN 15 foil that was used to cover the entire work surface and was weighted down at the edges. This was followed by heating the painting to 65 °C and establishing a pressure of 20 kPa. Once the target temperature was reached, the heating was switched off, while the pressure was slightly increased and switched off only when the painting had cooled to room temperature. As mentioned above, the paintings were treated on the table in thirds due to their large format. Before the paintings were mounted on the new stretchers, we covered the exposed areas of the new canvases with matting made of linen canvas. The matting protects the exposed parts of the canvases from environmental impurities while aesthetically complementing the paintings.

The new stretchers were made in the same dimensions as the previous ones, with the addition of a backing board (Gosar Hirci, 2007: 25). The 8 cm stretcher bars were made of massive poplar wood. The outer edges of the stretcher bars have grooves into which T-shaped perimeter strips with a raised lip are fastened. Below the groove is a system of springs enabling the perimeter strips to be expanded up to 3 cm by tightening the screws. This is the mobile part of the frame that allows adjustment of the canvas tension. The built-in backing board is 10 mm away from the back of the paintings. It consists of a 6 mm thick spruce plywood board, which protects the back of the paintings from mechanical damage and dirt and slows down the impact of climatic conditions. The paintings are attached to the new stretchers using staples applied over the lining canvas.

Filling

Filling played an important part in the presentation of Carpaccio's the *Massacre* and *Presentation*, while also ensuring that the exposed areas of the original support were protected from direct environmental influences. Identifying the composition of the original and added materials facilitated the selection of the appropriate conservation-restoration interventions, as well as the range of employed materials. The original pictorial layers of both paintings are damaged. Damaged areas are somewhat more extensive in the case of the *Massacre*, where there are major losses in the lower and central parts of the painting in addition to the damaged edges. In the case of the *Presentation*, damage is less extensive and concentrated mainly at the edges and the bottom of the painting. The losses in the paintings are very distracting, as they focus the gaze on the irregularities of the painted surface instead of the whole. Successful reconstruction of the pictorial layer depends, among other things, on the choice of filler, the method of filling and texturing, and on approximating the surface of the original painting to the greatest degree possible. Among the factors that shape the surface of a painting are the support, the brush strokes characteristic of the author, the natural ageing of materials, and any irregularities due to environmental influences (Knut, 1999: 244).

When choosing a filler, we must pay attention to the reversibility of the materials used, sensitivity to climatic changes, mechanical and dimensional stability and compatibility with the original materials in the painting, while also taking into account the chemical, physical and mechanical properties of binder and filler (Fuster-López, 2012: 587). Last but not least, the colour of the original ground should also be considered and approximated in order to achieve the depth and tonal range of the original paint applications (Fuster-López, 2012: 603). The original ground in Carpaccio's paintings was white. Considering the above requirements and the presumed composition of the original ground, traditional gesso was the logical choice for the filler. It is also a material with which we have years of experience. As both paintings were impregnated with wax, there was a risk of poor adhesion of the filler to the oily surface, and thus of filler detaching and falling off. The alternative to the gesso filler was the Beva filler, a synthetic material compatible with the natural wax-resin adhesive (Knut, 1999: 242). The choice between the two materials was based on adhesion tests performed on a canvas impregnated with the wax-resin adhesive. Such a canvas was used to line the original support of one of the paintings. Both types of filler showed good adhesion to the prepared ground and thus

made our decision easier. We first removed the old restoration materials from the losses and stabilised the pictorial layers. Areas where the original support was missing along with the pictorial layer were repaired with inserts made of stiffened and impregnated canvas. This limited the absorbency of the canvas inserts, which could otherwise affect the consistency of the filler. The inserts reduced the depth of the damaged areas. The filler was prepared from Bologna chalk that was sieved and gradually added until saturation to a warm 7% solution of rabbit glue. In order to reduce absorbency and improve viscosity, the filler was enriched with a small amount of bleached linseed oil. Heated filler was applied with a brush in thin layers that were allowed to dry between each pass. Application in multiple layers prevents excessive shrinkage and the resulting cracking of the filler during drying. On larger surfaces, we used soft flat brushes of different sizes to ensure a more even application. Once the filled areas were completely dry, we matched them to the height of the original pictorial layer. We used sandpaper of various grit sizes to obtain a smooth and even surface. The edges that came into contact with the original and the smaller infills were treated with small-bladed scalpels with various attachments to ensure control and accuracy. Excess filler on the original paint layer was removed with slightly moistened cotton swabs, while a mixture of water and ethanol was used along the edges of the infilled areas. In this way, we reduced exposure to water and shortened the evaporation time, thus preventing the filler from getting wet and losing its form.

The morphology of the original painted surface is very similar in both Carpaccio's paintings. It is characterised by the rough grain texture of the original support woven from hand-spun threads of varying thickness, the outlines of which are visible through a very thin pictorial layer. The basic guiding principle in texturing the smoothed infilled areas was the same in both paintings, barring small variations in the execution. To simulate the weave pattern, we tested canvases of different densities and chose a loosely woven fabric, which produced a more pronounced negative imprint on the surface of the infilled areas. While this can be distracting in some cases, the imprinted texture matches the surface of the original adequately (Figure 19). Since gesso filler is not thermoplastic, we tested two approaches to soften the surface. In the *Massacre*, we first coated the smoothed filler with ethanol, then pressed the canvas onto the softened surface with a heated spatula; in the *Presentation*, we soaked the canvas in a mixture of ethanol and water, then ironed it into the dry surface. Both approaches yielded optimal results. While imprinting the canvas, we made sure that the direction of weaving matched that of the original support. We also paid attention to the depth of the imprints. An imprint that is too shallow may get completely filled with paint and obscured during retouching, while a very deep imprint can make retouching challenging, as it is more difficult to paint over. The next step was to simulate the thickened and strongly pronounced weaving threads. We built this pattern in the pastiglia technique, applying multiple layers of slightly thicker filler, which was left to dry then shaped with small-bladed scalpels (Figure 20). Lateral illumination was of key importance in this process, since it emphasised the structure of the surface – textures, patterns and irregularities specific to the painting (Figure 21). It facilitated the workflow and allowed us to monitor the progress and make improvements. The results of the procedure were fully visible only when the filled surfaces were retouched and varnish was applied. The extensive filling and texturing posed a unique challenge that required a well-considered approach and a great deal of respect for the preserved original.

Retouching and varnishing

The choice of the retouching methodology for the *Massacre* and *Presentation* was based on the principle of using materials that are compatible with the original, reversible and stable. There are many well-tried materials available on the market, so there is no justification for using techniques with short durability. Retouching was carried out in a uniform manner across the entire painted surface, rather than on individual parts, as this allowed us to better assess when the painting was really finished. However, such an approach to retouching is more difficult when working with large formats, as it often involves more than one person. Several conservator-restorers worked on the paintings at the same time, usually two per painting, and three if necessary. Before starting we asked ourselves a number of essential questions. Which approach to choose: a holistic or a local one? What will be the extent of the intervention? Do we only retouch the missing parts or should the areas where the original has faded or changed in tone also be included? Do we have enough information to reconstruct the areas of extensive damage, and how should we deal with the visually distracting overpaint fragments that could not be completely removed? We raised these questions at a meeting of the expert committee, and also approached Stefano Scarpelli, a renowned retouching expert, conservator and restorer, for an opinion on the reconstruction in areas of extensive damage.

Retouching was carried out in two stages. We used high-quality gouache paints for the underpainting. The gouache technique is distinguished by the density, coverage and brightness of the colours, which contain white chalk in addition to pigments. As the latter is water-soluble, prior varnishing of the paintings was not necessary. Paints were applied to the damaged areas mostly monochromatically. In doing so, we took into account the direction of the applications and the brushstrokes, where they were visible, while in the areas of extensive damage we tonally followed the drawing and composition of the damaged details. Since the areas where the original paint on the tops of the threads was worn to the ground could not be filled beforehand, paint was applied directly to the countless tiny losses. Such an approach was not problematic, as the original pictorial layers are extremely thin, and the supports are completely impregnated due to past consolidation and lining. The underpainting was mostly done in lighter and slightly cooler tones. Surface saturation is important for building the retouching, so in some areas the paint had to be applied in several layers. Gouache paints grow darker as soon as they are varnished. To account for this fact, the suitability of the chosen tones was continually checked using a cotton swab lightly soaked in white spirit, which caused the gouache colours to momentarily take on the tone they will have after varnishing. Thoughtfully executed tonal underpainting helped us in building the final phase of retouching. We finished the underpainting process by applying a resin-based retouching varnish, which was formulated according to the traditional recipe from dammar dissolved in rectified turpentine in the ratio 1: 4. The varnish was applied to the paintings with wide flat brushes in a thin layer. The intermediate retouching varnish harmonises the gloss of the retouched areas and the original, while forming a protective layer between the preserved original and final retouching.

For the final step of the retouching, we chose Gamblin Conservation Colors resin paints, which are distinguished by their stability and reversibility, and are intended for use in conservation and restoration projects. They are made of high-quality pigments and Laropal A 81, a synthetic low molecular weight resin binder dissolved in a petroleum distillate mixture. Shellsol A aromatic solvent was used as a medium, while the gloss of the retouching was adjusted by adding drops of the same varnish as used for the retouching varnishing. In building the retouching, we followed the principle of progressing from the smaller to the larger. We first retouched minor losses and areas where the situation was unambiguous, while continuously checking the progress on the entire format to maintain balance. In this way, we were guided towards the final result by the retouching itself (Figures 22 in 23). We used thin brushes to apply the paint in lines, dots and glazes. We avoided the use of white paint so as not to oversaturate the retouched areas. Retouches need to appear airy, even somewhat unfinished from up close.

After consulting the expert committee, we decided to carry out reconstruction in the areas of extensive damage that obstructed the visual perception of the artwork. In practice, reconstruction is justified when the missing areas are predictable from a painter's point of view – when enough detail and/or fragments adjacent to the damaged area are preserved to guide us in reconstructing the missing portions of the composition. When the situation is ambiguous, it is extremely important to gather all available information, such as old reproductions or photographs showing the work in a better condition. Similar motifs by the same author can also provide clues. Carpaccio's late style is characterised by variations of his past works or parts of compositions, which was also evident in the two paintings. We thus sought analogies for the missing details in monographs and other art literature with reproductions of the author's works. In Venice, we inspected the cycle of Carpaccio's monumental paintings for the Scuola di Sant'Orsola, on which conservation-restoration interventions were just being completed.

Many of the figures in the *Massacre* are taken from the St Ursula cycle in the Scuola di Sant'Orsola, while the group of figures with the horseman on the left of the painting can be found in the painting *Saint George Slaying the Dragon* in the Scuola di San Giorgio degli Schiavoni in Venice. In the central part of the painting, we discovered a beautifully preserved female profile underneath an extensive brown overpaint. The otherwise neutral brown overpaint interrupted the figural composition of the scene of massacre, in which intertwined figures flow into the background like a river and disappear into the fantastical mountains. Since this prominent gap in the painting obstructed the visual perception of the artwork, we decided to reconstruct it (Figure 24). A similar female figure in profile, raising her hand towards the sky in suffering and as if in a defensive gesture, was found in the painting *The Martyrdom of the Pilgrims and the Funeral of St Ursula*. The missing part of the composition was reconstructed on the basis of a study of existing shapes and tiny fragments of the original colour in the immediate vicinity of the damaged area. A digital reconstruction served as orientation during the execution. The reconstruction was performed in the *tratteggio* technique, which is based on establishing a difference between the original and the retouch, achieved by a system of vertical lines of different colours on a light background. A scene reconstructed in this way can be easily distinguished from the original up close, while seen from a distance it rebuilds the composition into a whole. In the *Presentation*, reconstruction was carried out on the green shoes of the male figure in red drapery and on the back of the figure of the dog in the lower part of the painting. The missing forms were depicted by connecting the existing colour fragments and studying the foot of the figure in an identical posture from Carpaccio's earlier work *Death of the Virgin Mary* (Figure 25).

The retouching process ended with the final varnishing, which has an aesthetic function in addition to the protective one. The varnish evened out the gloss of the surfaces, blurred the lines between the retouched areas and the original paint layer, and emphasised the contrast and intensity of colours, thus adding depth to the scenes. In principle, conservator-restorers should use varnish that approximates the original gloss of the painting. In practice, it is unfortunately rarely possible to identify the original varnish in the old and damaged works that had been conserved and restored several times. Before the interventions, the paint layers in both paintings were covered with several layers of non-original varnishes. The choice of material was thus

determined by the properties of the paintings, the earlier conservation-restoration interventions, the condition of the paintings and the storage environment. We used traditional dammar varnish, which is considered a reliable material and is still used by many of the world's largest museums, although its properties are not entirely optimal, as it is sensitive to moisture and yellows over time. It was prepared from rectified turpentine, dammar resin, a stabiliser that inhibits yellowing, and bleached beeswax.[24] The addition of beeswax evens out the gloss, improves reversibility and reduces the hygroscopicity and brittleness. Due to its wax content, the mixture was slightly heated before application, so that the wax completely melted. The procedure was performed in the varnishing workshop, which is designed and equipped for this purpose.

Conclusions

The conservation-restoration interventions on *Presentation* and *Massacre* were completed in December 2018 (Figures 26 and 27). Before the installation in the Cathedral of the Assumption of Mary in Koper, the paintings were given new decorative frames and passe-partouts.[25] The profile of the frames was based on the existing frames of Benedetto Carpaccio's paintings and Vittore Carpaccio's altarpiece *Madonna with Child on the Throne and Six Saints*. The decision to add new elements to the previously unframed paintings was based on the principles of preventive conservation, since decorative frames are not only an aesthetic addition, but also protect the paintings during transport, display and storage. The new decorative frames made the installation of the large-format artworks much easier, while enhancing the view of the restored artworks by Renaissance masters (Figure 28). While the principal aim of our work is to preserve and present the authenticity of the work in question, true conservator-restorers are distinguished not only by their professional knowledge but by a strong sense of moral responsibility to the artwork and its viewer. Every painting is a story in itself, and although the way interventions are carried out depends on a number of technical factors, the intuitiveness and sensitivity of the conservator-restorer play an important part. Responsible conservation and restoration must not be a creative process for its own sake, but a solution to complex problems that must not be tackled in a dry, technical manner. The ability to understand works of art, their historical and artistic significance, and the storage environment is key to finding an effective solution to a conservation-restoration problem, based on the acquired technical knowledge and an ethical approach to artworks.

24 1 l double-rectified turpentine, 160 g dammar resin, 5 g Tinuvin 292, 16 g bleached beeswax.

25 They were created by Janez and Franci Novak.

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Konserviranje in restavriranje slike *Marija s svetnikoma* Benedetta Carpaccia iz koprske stolnice

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Izvleček

Popis stanja umetnine, razumevanje slikarske tehnologije in prepoznavanje starih konservatorsko-restavratorskih posegov so bile preliminarne stopnje obsežnega projekta Carpaccio, ki se je začel leta 2010. Vanj sta bili najprej vključeni sliki iz orgelskih kril Vittoreja Carpaccia *Pokol nedolžnih otrok* in *Predstavitev v templju*, v letu 2015 pa se je projekt razširil s konserviranjem in restavriranjem slike Benedetta Carpaccia *Marija s svetnikoma*. Rezultati naravoslovnih preiskav, stanje Benedettove slike in okolje hranjenja so vodili v pripravo zahtevnega konservatorsko-restavratorskega programa del, ki so se zaključila v letu 2018 z namestitvijo slik na levo steno prezbiterija v koprski stolnici.

Povzetek

Popis stanja umetnine, razumevanje slikarske tehnologije in prepoznavanje starih konservatorsko-restavratorskih posegov so bili začetki večletnega projekta Carpaccio. Vanj sta bili najprej vključeni sliki Vittoreja Carpaccia *Pokol nedolžnih otrok* in *Predstavitev v templju*, v letu 2015 pa se je projekt razširil s konserviranjem in restavriranjem slike njegovega sina Benedetta Carpaccia *Marija s svetnikoma*.
V Benedettovem slikarstvu je zaznati močan očetov vpliv. Po njem je povzel oblike in figure, vendar je v naslikanih motivih opaziti togost in naivnost. Slika *Marija s svetnikoma* je bila v preteklosti večkrat konservirana in restavrirana. Zadnji posegi so se izvajali v restavratorskih delavnicah Zavoda za spomeniško varstvo Ljudske republike Slovenije v letih 1958–1961. Kljub pomanjkljivi dokumentaciji o izvedenih posegih in uporabljenih materialih na Benedettovi sliki smo našli vzporednice v konservatorsko-restavratorski metodologiji, ki so jo uporabili pri Vittorejevih slikah iz orgel in pri veliki oltarni sliki *Marija na prestolu z detetom in šestimi svetniki*.
V komisijskih zapisnikih je navedeno, naj se vsi laki ohranijo in naj se slike po končanem konserviranju-restavriranju ponovno lakirajo. Ker je bila Benedettova slika v letu 2015 izjemno temna, smo prepričani, da so jo obravnavali na podoben način. Potemneli laki, neustrezne retuše in preslikave so sliko vizualno popolnoma spremenili. Večplasten lak je variiral po starosti, sestavi, stopnji degradacije in razporejenosti. Pod svetlejšim zgornjim slojem laka je bil temnejši spodnji sloj. Metodologija je temeljila na ločenem odstranjevanju posameznih plasti od površinske umazanije, lakov, utrjevalcev, retuš do preslikav. Sledili so postopki, ki so upočasnili propadanje originalnega nosilca in slikovnih plasti. Kitanje in retuširanje sta zakrila poškodovane predele slikovnih plasti in vizualno povezala naslikani motiv. Decembra 2018 so bila konservatorsko-restavratorska dela na oltarni sliki Benedetta Carpaccia *Marija s svetnikoma* in na slikah njegovega očeta zaključena.

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Uvod

Popis stanja umetnine, razumevanje tehnologije slikanja in prepoznavanje starih konservatorsko-restavratorskih posegov so bili začetek večletnega projekta Carpaccio. Vanj sta bili najprej vključeni sliki Vittoreja Carpaccia *Pokol nedolžnih otrok* in *Predstavitev v templju*, v letu 2015 pa se je projekt razširil s konserviranjem in restavriranjem slike Benedetta Carpaccia *Marija s svetnikoma*. Rezultati naravoslovnih preiskav, stanje Benedettove slike in okolje hranjenja so bili temelj za pripravo obsežnega konservatorsko-restavratorskega programa[1] (slika 1).
Benedetto Carpaccio, sin bolj znanega renesančnega slikarja Vittoreja, je bil domnevno rojen v Benetkah v začetku 16. stoletja. Leta 1540 je v Kopru pridobil državljanstvo in kasneje na Primorsko preselil tudi atelje, ki ga je podedoval po očetovi smrti. Pripovednost je zagotovo ena od njegovih večjih vrlin. Motive je slikal v bogatih barvnih kompozicijah in z izrazito svežino svetlosti, ki je bila v času renesanse zelo priljubljena. V Benedettovem slikarstvu je zaznati močan očetov vpliv. Pri slikanju figur se je naslanjal na njegove kartone, vendar so detajli naslikani enostavno in stilizirano. Upodobljeni liki so del ikonografskega repertoarja renesančnega slikarstva druge polovice 15. stoletja in zgodnjega 16. stoletja. Naročniki Benedettovih del so bili verski rodovi, in njegova dela so del kulturne dediščine Slovenije, Istre in Italije. Kmalu po očetovi smrti je Benedetto slikanje opustil, vendar je opravljal administrativna dela za mesto. Njegovo zadnje datirano delo iz leta 1541 je slika *Jezusovo ime s štirimi svetniki* iz cerkve sv. Ane v Kopru (Pesenti, 1977).
Benedettova slika *Marija s svetnikoma* je bila v preteklosti večkrat konservirana-restavrirana. Zadnji posegi so se izvajali v restavratorskih delavnicah Zavoda za spomeniško varstvo Ljudske republike Slovenije[2] (Sitar, 2015: 30). Iz komisijskih zapisnikov med letoma 1958 in 1961 lahko le delno rekonstruiramo, kaj se je dogajalo s slikami iz orgel Vittoreja Carpaccia, z veliko oltarno podobo *Madona na prestolu z detetom in šestimi svetniki*, s sliko Benedetta Carpaccia in z *Zadnjo večerjo* iz frančiškanskega samostana v Piranu. V zapisnikih komisija za spremljanje konservatorsko-restavratorskih posegov določa, da je treba vse slike preiskati z navadno svetlobo, infrardečo svetlobo, ultravijolično svetlobo in rentgenom ter izvesti kemijske analize.[3] Odgovornost za dokumentacijo je bila dodeljena predsedniku komisije in vodji restavratorskega oddelka prof. Mirku Šubicu. Iz obstoječih dokumentov je razvidno, kaj naj se zgodi z Vittorejevimi slikami in s sliko *Zadnja večerja*, medtem ko sta za sliko Benedetta Carpaccia izpostavljena le kitanje in retuširanje (slika 2). Kljub pomanjkljivi dokumentaciji o izvedenih posegih in uporabljenih materialih na Benedettovi sliki smo našli vzporednice v konservatorsko-restavratorski metodologiji, uporabljeni pri Vittorejevih slikah. V zapisnikih je navedeno, naj se vsi laki ohranjajo, ne glede na debelino in ton nanosov, in naj se slike po končanih posegih ponovno lakirajo. Ker je bila Benedettova slika izjemno temna in močno lakirana, smo prepričani, da so jo obravnavali na enak način. Dokaz za to so bile tudi retuše iz tistega obdobja, saj so jih prilagodili že obstoječemu temnemu tonu postaranih lakov. Najbolj moteča je bila retuša na Marijinem obrazu, izvedena v močni trateggio tehniki (slika 3). V tistem obdobju so vse štiri slike tudi podlepili. Ker še niso imeli dublirne mize, so postopek izvajali ročno (Demšar, 1972: 37–40). V nasprotju s slikami iz orgel je masa za podlepljanje pri Benedettovi sliki vsebovala škrob, klej s polnilom iz kalcita in naravno smolo (Kavkler, Bešlagič, 2018). Lahko, da masa izvira iz 19. stoletja, ko so bile slike restavrirane v Italiji. Poškodbe slikovnih plasti so bile zapolnjene s kitom, pripravljenim iz mešanice kalcita, gipsa in kaolina. Veziva ni bilo mogoče natančneje identificirati (Kavkler, Bešlagič, 2018), vendar smo pri odstranjevanju kita izoblikovali mnenje, da gre najverjetneje za olje, kar je bilo dokazano v retuširnih barvah.

Stanje slike

Podokvir in nosilec

Kvaliteten podokvir in ustrezno hranjenje slike ohranjata nosilec napet, kar omogoča optimalen prikaz naslikanega motiva. Čeprav je podokvir sekundarni element, je ključnega pomena za dolgo in stabilno stanje likovnega dela. Pri Benedettovi sliki so dokazi o obstoju originalnega podokvira žal izgubljeni. Pri zadnjih konservatorsko-restavratorskih posegih je bil obstoječi podokvir, pa naj je bil originalen ali ne, po vsej verjetnosti tako močno uničen, da so se odločili, da ga nadomestijo z novim. Kljub relativno dobri izdelavi je bil zaradi neustreznih klimatskih pogojev rahlo deformiran. Manjkale so tudi zagozde. Nezaščiten hrbtni del slike je bil prekrit z umazanijo, ki se je nabrala tudi v spodnjem delu slike med nosilcem in letvijo podokvirja.
V zahodnem slikarstvu je večina tkanih nosilcev iz lanu, konoplje, svile ali bombaža. Umetniki so le redko zabeležili vzroke za izbiro določenega platna. Največkrat so uporabili na trgu razpoložljiva platna ali pa sta izbiro pogojevala specifično tkanje in sestava. V beneškem slikarstvu 16. stoletja so večinoma uporabljali laneno platno keper vezave (Young, 2012). Ohranjenost tkanega nosilca je odvisna od napenjanja, impregnacije, slikarskih barv, lakov, okoljskih

1 Preiskave so izvajali Katja Kavkler, Petra Bešlagič in Sonja Fister iz Naravoslovnega oddelka ZVKDS RC ter Andrej Hirci iz Narodne galerije. Konservatorsko-restavratorske posege sta izvajali Barbka Gosar Hirci in Sanela Hodžić.
2 Informacijsko-dokumentacijski center za dediščino, Ministrstvo za kulturo.
3 Člani strokovne komisije, ki je bila imenovana 7. 2. 1958, so bili Izidor Cankar, Boris Fakin, Božidar Jakac, Gojmir Anton Kos, France Mihelič, France Stele, Mirko Šubic, dr. Marjan Zadnikar in Milan Železnik.

pogojev in konservatorsko-restavratorskih posegov.
Pri Benedettovi sliki je platno gosto tkano in na sprednji strani so vidne specifične diagonalne linije keper vezave, zaradi česar je površina bolj gladka. Format meri v višino 244 cm, v širino 177,5 cm in je sešit iz treh različno velikih kosov platna. Stabilno stanje originalnega nosilca so potrdili rezultati naravoslovnih preiskav, s katerimi sta bili pregledani sestava in morfologija vlaken, ki so kljub starosti in preteklim posegom ohranila svojo obliko (Kavkler, Bešlagič, 2018). Vidnih je bilo nekaj manjših predrtin ob robovih slike in nekoliko izrazitejša lokalna poškodba na zeleni preprogi pod Marijinim prestolom, ki so jo v preteklosti ustrezno sanirali. Vanjo so vstavili platneni kos, ki se je po sestavi in tkanju ujemal z originalom. Ker je bil lokalni poseg kvalitetno izveden, smo se odločili, da ga ohranimo.
Robovi slike so bili oblepljeni s klejnim trakom, pod katerim so se pokazali številni žebljički. Nekateri med njimi so z leti zarjaveli, rja pa se je prenesla na originalno platno. Na spodnjih vogalih so v preteklosti originalni nosilec zaradi lažjega napenjanja rahlo zarezali. Natančen popis stanja nosilca z zadnje strani je bil pred konservatorsko-restavratorskimi posegi otežen, ker je bila slika podlepljena.

Podloga in barvna plast

V stratigrafskem prerezu slike je podloga sloj med tkanim nosilcem in barvno plastjo. Slikovno površino naredi trdnejšo, manj vpojno, svetlejšo ali temnejšo. Kvalitetna podloga prepreči neenakomerno vpijanje veziva iz barv, kar vpliva na njihovo izrazitost, trajnost in stabilnost. Barva in struktura podloge imata tudi pomembno estetsko funkcijo. Tehnično gledano, gre sicer za mehansko pripravo platna, vendar so slikarji podlogo velikokrat obravnavali kot prvi slikarski nanos. Monokromatska podslikava, ki je takoj na podlogi, se ne obravnava kot njen del, temveč kot prvi avtorski barvni nanos, s katerim je slikar vplival na izraznost naslikanega motiva (Stols-Witlox, 2012).
V stratigrafskem prerezu slikovnih plasti je bila na Benedettovi sliki dokazana izjemno zanimiva večplastna podloga (slika 4). Domnevamo, da je takšen način priprave nosilca Benedetto izbral zaradi želje, da bi ustvaril gladko in svetlo slikovno ploskev. Nosilec je močno impregniran v debelih plasteh. Prvi sloj podloge je iz gipsa in kleja. Sledi mu izolacijski sloj, katerega sestava ni določena. Na njem je rdečkast sloj iz cinobra, gipsa in kalcita. Zadnji, rjavi sloj vsebuje cinober, gips, kalcit, žgani oker in žgano sieno, zeleno zemljo in hematit. Rdeči in rjavi sloj sta ponekod popolnoma ločena, drugod pa prehajata drug v drugega, kar lahko pripisujemo načinu nanašanja. Morda je bil rjavi sloj nanesen na svežega rdečega in je zato na nekaterih mestih prišlo do prepletanja. V obeh slojih so prisotne sledi olja, vendar je bilo vzrok zanj zelo težko dokazati predvsem zaradi preteklih konservatorsko-restavratorskih posegov. Lahko, da je olje ostanek impregnacijskega sloja ali pa gre dejansko za mastno podlogo. Rdečo in rjavo plast lahko definiramo kot podlogo, medtem ko svetla sloja nad njima lahko razumemo kot podslikavo. Neposredno na rjavem je beli sloj iz svinčevo bele in zelene zemlje. Sledi mu sloj iz svinčevo bele, cinobra in kalcita. Vezivo v belih slojih je olje (Kavkler, Bešlagič, 2018). Zaradi svetlih slojev podslikave Benedettova slika deluje sveže.
Pigmenti v kombinaciji z vezivom tvorijo homogen sloj. Da bi bolje razumeli, zakaj je slikar uporabil določene pigmente in veziva, je med njimi treba najti povezavo. Olje fizikalno in kemično drugače vpliva na pigmente kot gumiarabika ali jajce. Kot pri pripravi podloge se tudi pri slikarski tehniki način uporabe v severnih in južnih evropskih deželah močno razlikuje. Prehod iz uporabe kleja in jajca k olju je potekal postopno, zato ni nenavadno, da sta pri velikem številu slikarjev na posameznih likovnih delih uporabljeni obe tehniki. Dokazano je, da so za inkarnate uporabljali jajčno vezivo ter olje dodali v temnejše rdeče, rjave, zelene in modre tone. Pri tem je seveda prišlo tudi do razlike v zasičenosti posameznega sloja in posledično sijajnosti površine. Temnejši toni so zaradi olja delovali globlje in temneje (Hermens, Townsend, 2012).
Pri Benedettu je vezivo olje. Rezultati naravoslovnih preiskav so pokazali, da je motiv naslikan v eni do štirih barvnih plasteh (Kavkler, Bešlagič, 2018). Beli toni so iz svinčevo bele in kalcita. Svinčevo bela je eden od najpomembnejših pigmentov v slikarstvu in je bila edini bel pigment vse do 19. stoletja. Gre za intenziven pigment, ki tvori močno nasičen barvni sloj, zato so ga uporabljali za podslikavanje in pudarjanje svetlobnih odsevov. Pri obravnavani sliki je svinčevo bela prisotna v svetlih slojih podslikave, na Marijinem prestolu, Miklavževi draperiji in na območju neba. Rdeči toni so slikani s cinobrom, za lazure na Marijini draperiji je uporabljen madder. Kombinacija svinčevo bele in cinobra je prisotna v inkarnatih. Slikar je rumene tone naslikal s svinčevo kositrno rumeno tipa I in svinčevo glajenko. Svinčevo kositrno rumena je prisotna na Miklavževem rdečem ogrinjalu, preprogi pod Marijinimi nogami, drevesih in ozadju. V kombinaciji s cinobrom je svinčeva glajenka prisotna na Marijini rdeči draperiji. Modri toni so slikani z azuritom in ultramarinom. Azurit je najpomembnejši moder pigment v renesančnem slikarstvu, čeprav ga je po popularnosti zasenčil dragocenejši ultramarin. V 15. in 16. stoletju je bil velikokrat uporabljen kot podslikava ultramarina, kar je dokazano tudi pri Benedettovi sliki. V zelenih tonih dreves in rastlinja je uporabljen v kombinaciji s svinčevo kositrno rumeno. Ultramarin je bil prisoten v slikarstvu 14. in 15. stoletja in je tedaj skupaj s cinobrom in zlatom sestavljal briljantno barvno trojico. Ker je bil Carpaccio iz znane in uveljavljene beneške družine, mu je bil dragocen pigment dostopen brez večjih težav. Oglje je stabilen pigment in slikar ga je dodajal svinčevo beli v arhitekturnih elementih, večja količina pa je prisotna tudi na zeleni preprogi pod Marijinim prestolom.
Kromatičnost pigmentov je ob nastanku slike najintenzivnejša, kasneje pa se zaradi različnih dejavnikov spreminja. Kemične reakcije med posameznimi materiali, ki jih lahko povzročijo okoljski in drugi dejavniki, vplivajo na bledenje ali temnenje uporabljenih barv. Pri Benedettovi sliki so nekateri predeli izrazito temni, skoraj črni. Zagotovo niso bili takšni, ko je slika nastala. Izpostaviti velja zeleno preprogo pod Marijinim prestolom in temno rjavi ton rastlinja in dreves v pokrajini, ki je bil ob nastanku slike nedvomno naslikan v zelenih odtenkih. Razpoke so največkrat podatek, s katerim je mogoče oceniti kvaliteto slikarske tehnologije in proučiti zgodovino slike. Vzrok za njihov pojav je mogoče pripisati slikarski tehniki, staranju materialov, neustreznemu okolju ali različnim mehanskim dejavnikom. Na Benedettovi sliki so vidne predvsem starostne razpoke, ki so naravni pojav in so bile stabilne.
Cenino Cennini je že v 14. stoletju opozoril, da je lak močna substanca. Prepoznal je kakovost prozorne tekočine, ki poudari kromatičnost barv in jih obenem tudi zaščiti. Čeprav je bilo lakiranje uveljavljena praksa v slikarstvu srednjega veka, so točni podatki o praksi in receptih izjemno skopi (Goltz, Proctor, Whitten, Mayer, Myers, Hoenigswald, Swicklik, 2012). Na Benedettovi sliki originalnega laka nismo našli. Dokazan je bil mlajši sloj alkidnega ali poliestrskega laka, pod katerim je bil starejši damar lak (Kavkler, Bešlagič, 2018). Za katero vrsto umetnega laka gre, ne vemo, obstajajo pa restavratorski zapisi, iz katerih je mogoče razbrati, da so v šestdesetih letih uporabljali sintetični smoli AW2 in MS2B v kombinaciji z damar lakom (Kokalj, 1972: 94). Laki na Benedettovi sliki so bili zelo temni, rjavi in neenakomerno naneseni. V spodnjem delu, predvsem na območju svetlih barvnih tonov, je bilo opazno zatekanje laka kot posledica neenakomernega in neprevidnega nanašanja.

Konservatorski in restavratorski posegi

Tehnično fotografiranje

Od 19. stoletja naprej se je začela na področju umetnosti uveljavljati znanost, ki omogoča vpogled v notranjost slike. Z različnimi preiskovalnimi tehnikami je mogoče odstreti skrite informacije o slikarjevem načinu dela, kar so velikokrat ključni podatki za prepoznavanje avtentičnosti in globlje razumevanje umetnikovega sporočila (Saunders, 2012). Tehnična fotografija danes zavzema vodilno vlogo in je nepogrešljiva za boljše razumevanje strukture, evolucije in stanja slike. Gre za fotografiranje slik z navadno, ultravijolično in infrardečo svetlobo.
Ena izmed najbolj uporabnih tehnik je temeljit in premišljen pregled slike z dobrim virom vidne svetlobe (VIS), s čimer smo pregledali in fotografirali tudi Benedettovo sliko (slika 1). Informacije o morfologiji površine smo dobili z osvetlitvijo slike pod ostrim kotom (RAK). Fotografija ultravijolične fluorescence (UVF) je ena izmed najpomembnejših in obenem tudi najcenejših preiskovalnih tehnik. Žarki ultravijolične svetlobe se odbijajo od površine, in materiali, ki reagirajo, ustvarjajo kontrast oziroma t. i. fluorescenco, ki poda vrsto informacij, ki jih je treba razumeti in pravilno interpretirati. Ugotovili smo, da so na barvnih plasteh Benedettove slike debel sloj oksidiranega laka in temnejša območja starih retuš (slika 5). Metodo smo uporabljali tudi med odstranjevanjem vseh slojev lakov, retuš in preslikav. Fotografija pri infrardeči svetlobi (IRF) je nepogrešljiva za identificiranje avtentičnosti likovnega dela, odkrivanje podrisbe, prepoznavanje slikarjevega znanja na področju kompozicije in anatomije ter določanje obsega starih posegov na slikovnih plasteh. Preiskovalna metoda je uspešnejša na slikah, katerih podloga je bela in ni obarvana z zemeljskimi pigmenti, kot je bilo tudi na naši sliki. Pri njej smo že s prostim očesom zaznali risbo na draperiji sv. Miklavža, vendar smo jo s fotografijo pri infrardeči svetlobi tudi ustrezno dokumentirali (slika 6). Svetlost Benedettove podloge pa je vplivala tudi na ton rentgenske podobe (RTG). Slika, ki vsebuje veliko svinčevo bele v kombinaciji z drugimi pigmenti, je na rentgenu svetlejša (slika 7).

Odstranjevanje potemnelih lakov in retuš

Na abstraktni ravni je pri čiščenju in odstranjevanju lakov, retuš in preslikav treba iskati ravnotežje med tveganjem in koristnostjo (Bomford, 2012). Zaradi potemnelih lakov, retuš in preslikav je bila Benedettova slika vizualno popolnoma spremenjena, zato je bilo odstranjevanje neoriginalnih plasti zapleten in zahteven postopek (slika 8). V praksi je mogoče izbrati med popolnim, parcialnim ali selektivnim posegom. Izbor ustrezne metodologije je pogojen s stanjem originala, restavratorjevim znanjem in etičnostjo ter v nobenem primeru ne sme vplivati na naravno staranje originala (Phenix, Wolbers, 2012).
Laki na Benedettovi sliki so bili naneseni v več slojih in so se razlikovali po starosti, sestavi, stopnji uničenosti in razporejenosti. Pod svetlejšim zgornjim slojem laka je bil temnejši spodnji sloj. Metodologija popolnega odstranjevanja neoriginalnih plasti je v našem primeru temeljila na ločenem odstranjevanju površinske umazanije, lakov, utrjevalcev, retuš in preslikav. Čeprav je v praksi mogoče najti eno učinkovito topilo za odstranjevanje vseh slojev, smo se takšnemu načinu dela izognili. Izbrali smo progresivni in selektivni pristop, ki nam je omogočil izbor specifičnih topil za posamezen premaz.
Na Benedettovi umetnini je bil prisoten debel sloj površinske umazanije, ki je bila najizrazitejša na zgornjem delu okrasnega okvirja. Po mehanskem razpraševanju je sledilo kemično odstranjevanje površinske umazanije na licu slike. Površino stabilnega barvnega sloja smo očistili z vodnim

topilom.[4] Sledilo je preizkušanje testov topnosti, s katerimi smo proučili možnosti za odstranjevanje neoriginalnih lakov, potemnelih retuš in preslikav.
Testiranje v konservatorsko-restavratorski praksi pomeni preverjanje učinkovitosti različnih topil na materialih, ki jih želimo odstraniti. To izvajamo na manjših, diskretnih predelih slike, kar omogoča varnejšo izvedbo. Priporočljivo je testiranje topnosti na svetlih barvnih tonih, ki so manj občutljivi kot rdeči, zeleni, črni in rjavi. Kakovost testiranja je rezultat znanja in tehnične izvedbe, kar je vidno tako v fizikalnem kot v kemičnem smislu. Pri odstranjevanju starih lakov, retuš in preslikav je smiselno pripraviti natančno shemo mešanic polarnih in nepolarnih topil. To so mešanice, pri katerih se polarnost postopno dviguje v točno določenih razmerjih. Pri testiranju se preverja njihov vpliv na sloje, ki jih je treba odstraniti, in na originalno poslikavo. White špirit, xylen, *n*-butyl acetat, propanol, aceton in etanol so najpogostejša topila, ki se uporabljajo za pripravo takšnih mešanic. Testi topnosti Kecka, Rabina, Pomerantza in Ruhemana vključujejo topila, ki danes veljajo za škodljiva. Novejša Wolbersov in Cremonesejev test toksična topila izključujeta in predlagata mešanice iz kombinacij izooktana ali shellsola T in acetona, izooktana ali shellsola T in etanola ter acetona in etanola.
Pri Benedettovi sliki smo za poskuse odstranjevanja najmlajšega laka uporabili test po Cremoneseju, za katerega smo mešanice pripravili iz izooktana, acetona in etanola. Bistvo čiščenja je, da uporabimo topila, ki bodo imela ustrezen učinek na snov, ki jo je treba odstraniti, in pri tem ne bodo škodila originalu. Priporočljivo je uporabiti topilo, ki ga je mogoče modificirati. Za odstranjevanje najmlajšega laka in najzgodnejših retuš smo uporabili s testiranjem preizkušeno mešanico izooktana in etanola[5] (slika 9). Odstranjevanje smo izvajali postopno po celotni sliki in kakovost izvedbe preverjali z ultravijolično svetlobo, kar smo fotografsko dokumentirali (sliki 9 in 10).
Pod odstranjenim mlajšim lakom je bil neenakomerno nanesen starejši damar ali mastiks lak. Že sveže pripravljen damar lak je delno oksidiran in vsebuje komponente, ki imajo določeno kislost, s staranjem pa se njegova topnost še zmanjša. V praksi se za pripravo raztapljanja damar smole uporablja rektificiran terpentin, in morda so mu v našem primeru dodali tudi olje. Zaradi preteklih posegov, staranja in neenakomerne razporejenosti je bil starejši lak težje odstranljiv. Preizkusili smo različne mešanice topil, med njimi tudi bolj polarne, vendar ni bila nobena uspešna. Testiranje smo nadaljevali s topili v obliki gelov in emulzij. Geli so viskozni, zato je mogoče njihovo delovanje časovno regulirati. Velikokrat se uporabljajo za odstranjevanje trdovratnih starih lakov, retuš in preslikav. Pripravimo jih iz topila, zgoščevalca in površinsko aktivne snovi. Na obravnavani sliki smo preizkusili Benzil alkoholni gel.[6] Z njim smo lahko do neke mere odstranili trdovraten star lak. Ker je bilo treba postopek na istem mestu večkrat ponoviti, je to pomenilo za original določeno nevarnost, zato smo poiskali ustreznejšo metodo.
V praksi za odstranjevanje kompleksnejših plasti velikokrat uporabljamo voščeno milo, zato smo se odločili, da ga preizkusimo tudi na Benedettovi sliki.[7] Že med testiranjem na manjših svetlih površinah se je izkazal za uspešno izbiro. Na površino smo ga nanašali s čopičem preko tankega specialnega papirja, ki je imel vlogo vmesnika in pivnika in nam je olajšal odstranjevanje tako voščenega mila kot tudi raztopljenega laka. Čeprav smo se trudili, da bi bilo odstranjevanje enakomerno, so na spodnjem svetlem delu slike, kjer so bila vidna močna zatekanja laka, ostali temni madeži, ki so se zažrli v barvno plast. Preizkusili smo delovanje različnih mešanic nepolarnih in polarnih topil, ki smo jih pripravili po Wolbersu, vendar so bile vse preveč agresivne. Do neke mere je bila uspešna mešanica Shellsola T in acetona.[8] Nekateri madeži so se popolnoma povezali z originalno barvno plastjo, zato smo jih v nadaljevanju odstranili mehansko s kožnim skalpelom in najmanjšim rezilom. Postopek smo izvajali zelo previdno s povečevalnimi očali in majhno fizično silo ter sprotnim preverjanjem z ultravijolično svetlobo.
Po odstranjevanju temnih neoriginalnih plasti lakov smo odstranili stare kite (slika 11). Večja zakitana območja so bila na Marijinem obrazu, Miklavževi kapi in ozadju. Stare krhke kite, prekrite z retušo, smo odstranjevali mehansko s kožnim skalpelom in majhnim rezilom ter bili še posebej previdni pri stikih z originalom. Po odstranjevanju kitov se je na robovih originalne poslikave lepo pokazala debela plast rdeče podloge in delno tudi bela podslikava. Poškodbe so bile zalite s starim lepilom, ki je zaradi slabe kompatibilnosti s kiti preprečeval dobro povezavo z nosilcem, zato je bilo kite tudi bistveno lažje odstraniti. Zanimivo je bilo tudi to, da so se v lepilo vtisnile razpoke slikovnih slojev, kar lahko pripišemo konservatorsko-restavratorskim postopkom, pri katerih so uporabljali toploto in pritisk.

Konserviranje nosilca in slikovnih plasti

Slike so zgrajene iz različnih materialov, ki imajo karakteristično kemično sestavo in specifične fizikalne lastnosti. Različni dejavniki lahko povzročijo vrsto poškodb slikovnega sloja: ločevanje podloge od nosilca in/ali barve od podloge, razpokanost, prašenje pigmentov, oslabitev veziv, luščenje in odpadanje. Z utrjevanjem ustavimo propadanje materia-

4 0,2 % Mucina, 0,2 g triamonijevega citrata, 100 ml destilirane vode.
5 40 ml izooktana in 60 ml etanola.
6 100 ml benzil alkohola, 15 ml destilirane vode, 20 ml Ethomeen C-25 in 2 g Carbopola 940.
7 Izdelali smo ga po recepturi restavratorja Mihe Pirnata st., ki je bil v restavratorski ekipi v šestdesetih letih prejšnjega stoletja, ko so obnavljali Benedettovo sliko. Voščeno milo smo pripravili iz 1 l destilirane vode, 100 g beljenega čebeljega voska in 40 g amonijevega karbonata pH 10.
8 V razmerju 3 deli Shellsola T in 1 del acetona.

lov, ponovno vzpostavimo vezi med njimi in tako ohranjamo original. Na izbiro utrjevalca in obseg posega vplivajo pogoji hranjenja, stanje slike in njena zgradba, stari posegi ter upoštevanje vseh nadaljnjih postopkov. Najbolj razširjen princip v konservatorstvu-restavratorstvu je načelo reverzibilnosti. Pri utrjevanju je reverzibilnost težko vzpostaviti, saj želimo, da materiali v sliki ostanejo povezani in stabilni (Golz, Birkenbeul, Horovitz, Blewett, Dolgikh, 2012).
Z utrjevanjem Benedettove slike na sprednji strani smo stabilizirali poškodbe na robovih in preprečili morebiten nastanek novih poškodb pri posegih, ki so sledili: snemanje slike s podokvirja, odstranjevanje podlepljenega platna in tanjšanje starega lepila. Segret utrjevalec[9] smo nanašali s čopičem na lice slike preko majhnih kosov specialnega papirja. Za specifičen material smo se odločili na podlagi dolgoletnih izkušenj, stanja umetnine in okolja hranjenja. Ko je topilo iz utrjevalca popolnoma izhlapelo, smo sliko sneli s podokvirja in postopek utrjevanja nadaljevali v nizkotlačni mizi pod reguliranim pritiskom in kontrolirano temperaturo. Oslabljeni slikovni sloji so se tako utrdili in povezali.
Kot je bilo že večkrat omenjeno, je bila slika v preteklosti podlepljena. Z ročnim podlepljanjem, kar je bila praksa tistega časa, lepila ni bilo mogoče povsem enakomerno porazdeliti po celotni površini. Večja količina nanesenega lepila je ponekod prodrla skozi platno za podlepljanje in se je na zadnji strani odražala v obliki temnejših madežev. Po snemanju slike s podokvirja smo odstranili umazanijo na hrbtišču ter nadaljevali z odstranjevanjem podlepljenega platna. Slednjega smo ob robovih zarezali do originalnega nosilca na približno 30 cm široke trakove, ki smo jih posamično, previdno pod ostrim kotom odlepili z zadnje strani. Metodologija je omogočila varno odstranjevanje neoriginalnega platna, saj pri tem nismo uporabljali velike sile. Sliko smo med postopkom obtežili toliko, da se ni premikala.
Pod neoriginalnim platnom je bila debela plast starega lepila. Na podlagi izkušenj in materialne sestave smo se odločili, da ga odstranimo s kostnimi skalpeli in toploto. To smo dovajali na površino s specialnim restavratorskim puhalnikom, ki omogoča uravnavanje moči in temperaturo izpuha. Preizkusili smo tudi odstranjevanje z vlaženjem, vendar bi pri tem preveč poškodovali vlakna. Uporaba toplega zraka je bila bolj nadzorovana in učinkovitejša. Območja lokalne sanacije in šivov so v preteklosti dodatno utrdili s papirjem, ki smo ga skupaj z lepilom odstranili. S prepojenega nosilca smo lepilo lahko le delno odstranili, ostanki pa bodo med nitmi in v vlaknih vse do iznajdbe ustreznejše metode.
V konservatorsko-restavratorski praksi obstaja vrsta lokalnih sanacij poškodb, ki pomenijo minimalno intervencijo v tkani nosilec, in tudi v teh primerih je izjemno pomembna kompatibilnost materialov. Postopek zahteva predhodno pripravo slike, utrjevanje poškodovanih delov in končno stabilizacijo umetnine (Heiber, Tomkiewicz, Scharff, Levenson, 2012). Pri Benedettovi sliki smo uporabili dve vrsti lokalne sanacije. Prva je bila vstavljanje koščkov platna v luknje in na poškodovane spodnje vogale slike, druga pa stabilizacija raztrganin in šivov. Manjkajoče dele originalnega nosilca smo nadomestili s strukturno podobnim lanenim platnom. Natančno pripravljene koščke smo vstavili v luknje originalnega nosilca in jih na zadnji strani fiksirali z lepilnim filmom in specialnim papirjem.[10] Izvedeni postopki pa žal niso zagotovili popolne stabilnosti originalnega nosilca, zato smo se odločili, da ga ponovno podlepimo z metodologijo, ki jo že vrsto let uporabljamo pri podobnih primerih (Hodžić, Gosar Hirci, Pečak, 2017: 90–106). Eden od temeljnih pogojev za dobro stanje nosilca in slikovnih plasti je tudi kakovostno izdelan podokvir. Za Benedettovo sliko smo izbrali lesen podokvir s sistemom, ki omogoča trajno napetost nosilca, ščiti hrbtišče pred umazanijo in uravnava negativne vplive vlage (Gosar Hirci, 2007: 25).

Dopolnjevanje manjkajočih delov slikovnih plasti

Kitanje je mogoče razdeliti v tri faze: nanašanje, niveliranje in teksturiranje. Pravilna izbira, nanašanje in strukturiranje materiala vplivajo na kakovost vizualne združitve poškodb, saj retuširanje samo po sebi ni dovolj za vzpostavitev povezave med manjkajočimi predeli in originalom (Fuster – López, 2012). Tipi in karakteristike manjkajočih predelov pa so lahko zelo različni. Če na sliki manjka poleg barvne plasti tudi podloga, kot je bilo to pri Benedettovi sliki, to zahteva popolno rekonstrukcijo podloge in barvne plasti.
Za kakovostno kitanje je pomembna pravilna metodologija, ki se začne z ustrezno pripravo poškodb. Čiščenje, utrjevanje in izoliranje omogočajo dobro povezanost med originalnimi in novimi materiali. Kadar se kitanje izvaja na območjih predrtin in lukenj, je treba te najprej pripraviti, kar smo v primeru Benedettove slike tudi naredili. Z vstavljanjem novega platna v manjkajoče dele originalnega nosilca smo se izognili preveliki debelini nanesenega materiala in pokanju.
Za dopolnjevanje podloge smo izbrali tradicionalno maso za kitanje, ki je narejena iz bolonjske krede in zajčjega kleja. V preteklosti so za povečanje viskoznosti kitu dodajali beneški terpentin, mi pa smo mu dodali manjšo količino beljenega lanenega olja. Kadar je originalna podloga obarvana, se masi za kitanje dodajo zemeljski pigmenti, čemur smo se izognili zaradi specifične bele podslikave. Večina kitov na osnovi vode se skrči že med sušenjem, zato smo nanesli nekoliko več materiala. Zakitane predele smo strukturirali v dveh fazah. Najprej smo jih nivojsko prilagodili in nato vrisovali različne vzorce razpok, imitirali poteze čopiča in druge površinske značilnosti originala. Nivojsko prilagajanje smo izvedli z rahlo ovlaženimi vatnimi tamponi, majhnimi bombažnimi krpicami in plutovinastimi zamaški. Na zravnani površini smo z redko maso za kitanje imitirali po-

9 10 % Beva 371 v white špiritu.
10 Beva obliž iz lepilnega filma Beva® 371 in specialnega papirja Lens Tissue L2.

teze čopiča. S kožnimi skalpeli z majhnim rezilom in ostrimi modelirkami smo vrisovali mreže razpok, ki so bile prisotne v originalu. Pri strukturiranju nam je bila v veliko pomoč osvetlitev obdelovalne površine s svetlobo pod ostrim kotom (slika 12). Za ta namen smo uporabili majhne LED reflektorje, ki so omogočili pregled obdelovanih območij z različnih strani. Stranska svetloba je poudarila strukturo in nepravilnosti površine in je bila eden od ključnih dejavnikov za kakovostno izvedbo. Z opisano metodologijo smo se poskušali čim bolj približati originalni strukturi slikovnega sloja in jo pripraviti na zadnji obsežen postopek – retuširanje.(slika 13).

Slikar na dvodimenzionalni površini ustvari vtis perspektive, barve in teksture. Iz spoštovanja do naslikanega motiva mora biti retuširanje objektivno in izogibati se je treba napačnim estetskim, konceptualnim in fizičnim informacijam. Čeprav bo restavratorjeva interpretacija avtorjevega dela subjektivna, retuša ne sme prekrivati originala. Sistematično izvajanje retuširanja od manjšega k večjemu omogoča postopno in poglobljeno razumevanje likovnega dela. Fizične poškodbe oslabijo povezavo med barvnimi toni, kar je v primeru Benedettove slike vodilo v izgubo informacij o detajlih na Marijinem portretu, Miklavževi kapi, nebu itd. (slika 14). Kadar manjkajoči deli zavzemajo velik del slike in so se pri tem informacije in oblike popolnoma izgubile, je smiselno razmišljati o rekonstrukciji. Za ustrezno izvedbo pa je treba najti primerne informacije, npr. podobne motive istega avtorja, stare reprodukcije ali fotografije iz časa, ko je bila slika v dobrem stanju, ipd. Nam so bile v veliko pomoč stare retuše, ki so bile oblikovno blizu originalu, vendar so negativno izstopale zaradi izrazitega trateggia in temnih barv. Vsak konservatorsko-restavratorski poseg, tako tudi retuširanje, mora biti ustrezno fotografiran z različnimi načini osvetljevanja pred in med izvedbo ter po njej, kar bo pomemben vir informacij v prihodnosti (Digney-Peer, Thomas, Perry, Townsend, Gritt, 2012).

Pri retuširanju je poleg izvedbe izjemno pomembna tudi izbira primernih pigmentov, veziv in topil, ki morajo zagotavljati kompatibilnost, reverzibilnost in stabilnost. Pri Benedettovi sliki smo retušo izvajali v treh fazah in z različnimi materiali. Podlagali smo z gvaši. Gre za tehniko, ki je zelo podobna akvarelni, le da imajo barve dodano belo kredo, kar jim zagotavlja svetlost in boljšo pokrivnost. Prekrili smo vse zakitane predele in tudi tiste, na katerih je bil barvni sloj obrabljen do podloge, z upoštevanjem načela od manjšega k večjemu. Podlaganje smo izvajali v svetlejših in rahlo hladnejših barvnih tonih, pri tem smo posnemali poteze s čopičem in smeri nanosov. Na nekaterih delih smo morali podlagati v več slojih, saj smo le tako dosegli zasičenost barvnih tonov. S tem smo ustvarili temelj za finalno retušo (slika 15). Ker smo se že pred retuširanjem odločili, da bomo sliko finalno lakirali, smo kvaliteto izvedbe sproti preverjali. Gvaši postanejo po lakiranju temnejši, zato smo retuše rahlo omočili z white špiritom. S tem smo začasno dosegli ton, ki ga retuše dobijo po lakiranju.

Po prvi fazi retuširanja z gvaši sliko praviloma vmesno lakiramo. Pri Benedettovi sliki smo se odločili, da retuširanje nadaljujemo z akvareli brez izolacijskega sloja laka. Tehniko smo izbrali zaradi izrazite svetlosti in zračnosti slike ter možnosti natančnega risanja razpok in drugih starostnih značilnosti originalne barvne površine (slika 16). Uporabili smo minimalno količino vode in se s tem izognili topljenju spodnjih gvašev. Zelo izrazite poteze čopiča smo dopolnili s trattegio tehniko, medtem ko smo nekatere manjkajoče dele naslikali direktno, vendar v svetlejših tonih od originalnih. V naslikanih figurah je veliko detajlov, nežnih barvnih prehodov in drobnih potez čopiča, pri čemer nam je prav akvarel omogočil, da smo se brez večjih težav približali avtorjevemu likovnemu izražanju. Rekonstrukcija na Marijinem obrazu in na Miklavževi kapi je bila z akvareli lažja in preciznejša. Oblikovno smo se naslanjali na retuše naših predhodnikov. Tudi v tem primeru smo površino občasno omočili z white špiritom. S tem smo razvili občutek za ton, ki ga bodo dobile retuše po lakiranju, in preverjali pravilnost izvedbe. Če se nam je zdelo, da kakšno območje ni kakovostno izvedeno, smo retušo previdno odstranili in postopek ponovili. Prav reverzibilnost vodotopnih barv je ena od pozitivnih lastnosti, ki nam je bistveno olajšala delo. Ko smo bili z rezultatom druge faze retuširanja zadovoljni, smo sliko lakirali.[11]

Sledila je tretja in zaključna faza retuširanja – lazuriranje z industrijsko pripravljenimi barvami na osnovi sintetične smole,[12] ki smo jih redčili z aromatičnim topilom.[13] Za doseganje transparentnosti določenih lazur smo barvam dodajali medij.[14] Sijajnost retuše smo uravnavali z dodajanjem istega laka, kot smo ga uporabili za vmesno lakiranje. Svetle dele neba, Marijin obraz, Jezuščkovo telo, Miklavževo kapo in belo oblačilo, Marijin prestol in spodnje stopnice smo retuširali s transparentnimi lazurami, s katerimi smo posnemali rumenkasti ton ostankov starega laka. Z gostejšimi barvami smo naslikali starostne madeže. Na temnejših predelih je bilo potrebnih več transparentnih nanosov. Temnejša območja slik so manj zasičena kot svetlejša in zato rjavkaste lazure hitreje matirajo, kar smo preprečili z dodajanjem majhnih količin laka. Z opisano metodologijo smo se približali originalu in integrirali poškodbe s spoštovanjem avtorjevega slikanja in karakteristik pol tisočletja stare umetnine (sliki 17 in 18).

Lakiranje vpliva na optični in estetski izgled obenem pa dolgoročno pozitivno deluje na stanje slike. Na podlagi individualne obravnave vsakega posameznega likovnega dela se restavrator odloči, ali je lakiranje potrebno, in če je, v kolikšni meri, ali pa se zaradi specifičnih karakteristik oz. avtorjeve želje temu izogne. Če imamo opravka z zelo poškodovano sliko, kot je bila tudi Benedettova, ki je bila v preteklosti tudi velikokrat konservirana-restavrirana, je originalni lak nemogoče rekonstruirati. V praksi je mogoče raziskati njegovo materialno sestavo, ne pa tona in sijaja.

Danes je priporočljiva uporaba čistih in transparentih lakov, ki so prilagodljivi pri ustvarjanju sijaja in zasičenosti barvnega sloja. Na trgu so na voljo naravni in umetni laki, katerih izbor pogojujejo stanje originala, restavratorski materiali in okolje hrambe. Smole, topila in dodatki morajo biti natančno izbrani, pomembna pa sta tudi količina in način nanašanja. Damar lak je bil prvi lak, razvit z namenom lakiranja restavriranih slik. Z leti se njegova polarnost spreminja, vendar generalno ostaja vedno topen (Goltz, 2012: 639). Damar lak je dobra zaščita za barvni sloj Benedettove slike, saj ima veliko pozitivnih lastnosti in z njim imamo veliko izkušenj. Močno poškodovana slika je bila kljub utrjevanju porozna in pusta. Po prvem lakiranju je bil sijaj neenakomeren in na določenih mestih popolnoma mat.[15] Zaključno lakiranje smo izvajali v lakirnici s pištolo za lakiranje in preoblikovanim lakom.[16] Rahlo segret lak smo nanašali dvakrat, najprej v horizontalni, nato še v vertikalni smeri, po celotni površini. Med posameznimi sloji se je lak popolnoma posušil. Pri izjemno poškodovanih starih slikah, kakršna je bila tudi Benedettova, je mogoče popolno zasičenost površine in enakomeren sijaj doseči le z večkratnim nanašanjem laka v tankih plasteh (slika 19).

Zaključek

Okrasni okvirji so estetski dodatek, vendar slike ščitijo med premikanjem, razstavljanjem in hranjenjem. Benedettova slika ima masiven lesen profiliran okvir s pozlačenim notranjim dodatkom, ki pa je bil poškodovan, nestabilen in neustrezen.[17] Čeprav okvir ni originalen, smo ga konservirali in restavrirali ter opremili z novim notranjim okvirjem. Notranji rob okrasnega okvirja smo oblepili s klejnim trakom, ki bo ščitil rob slike pred praskami. Slika je v okrasni okvir nameščena s posebnimi vijaki in desetimi lesenimi deščicami, s katerimi smo vzpostavili distanco med notranjim robom okrasnega okvirja in poslikano površino. V zgornjem delu ob zaključku polkroga smo na levi in desni strani okrasnega okvirja pritrdili dva močna kovinska elementa za obešanje na steno. V spodnjem delu smo namestili dva lesena distančna elementa. Slika je na steno pritrjena s specialno izdelanima kovinskima elementoma, ki skupaj z lesenima distančnikoma ustvarjata razmik med steno in zadnjo stranjo slike. S tem je zmanjšan neposreden vpliv vlage in umazanije, obenem pa je vzpostavljeno kroženje zraka za sliko.

Konec leta 2018 so bila konservatorsko-restavratorska dela na oltarni sliki Benedetta Carpaccia *Marija s svetnikoma* in na slikah iz orgelskih kril Vittoreja Carpaccia zaključena. Benedettova slika je prezentirana na levi steni prezbiterija v koprski stolnici med slikama iz orgelskih kril.[18] Konserviranje in restavriranje Benedettove slike nam je odstrlo mnogo zanimivih detajlov v slikarski tehnologiji. Pod potemnelimi laki se je pokazal z izjemno svežino naslikan motiv. Čeprav je Benedetto v določenih naslikanih detajlih bolj robusten od očeta Vittoreja, slika žari v ilustrativni barvni pripovednosti. Barvno sozvočje Marijine modre obleke, pregrinjala pod njenim prestolom in Miklavževega ogrinjala zaradi naivne perspektive deluje skoraj abstraktno. Izpostaviti velja tudi natančno naslikana Miklavžev portret in škofovsko oblačilo. Vsekakor lahko zaključimo, da konservirana in restavrirana renesančna trojica tvori zanimivo likovno kompozicijo in kvalitetno nadgrajuje historični sakralni prostor v Slovenskem primorju.

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11 Lak smo pripravili iz dvojno rektificiranega terpentina in damar smole v razmerju 3 : 1.

12 Gamblin Conservation Colours, Kremer Pigmente GmbH & Co.

13 Shellsol, A., Kremer Pigmente GmbH & Co.

14 Galdehyde Resin medium, Kremer Pigmente GmbH & Co.

15 Op.11.

16 Pripravili smo mešanico iz 1000 g dvojno rektificiranega terpentina, 160 g damar smole, 5 g Tinuvina 292 in 16 g beljenega čebeljega voska.

17 Konservatorsko-restavratorske posege na okrasnem okvirju so izvajale Nuška Dolenc Kambič, Nadja Podboj, Nuša Saje in Tina Vrenko.

18 V Restavratorskem centru je montažo izvedla tehnična ekipa z Markom Brisenhornom in Janezom Novakom, ki je bil vodja del.

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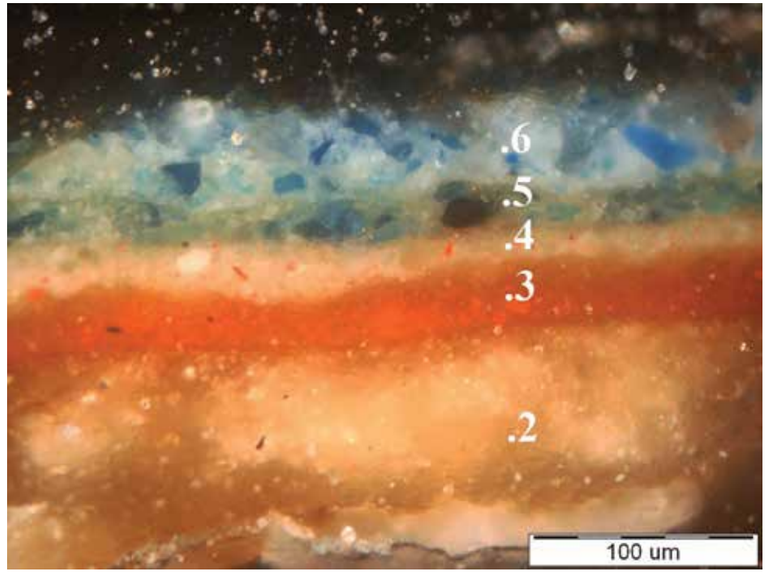
1. Koper, cerkev Marijinega vnebovzetja, Benedetto Carpaccio, slika *Marija s svetnikoma* pri navadni osvetlitvi s sondami odstranjenega najmlajšega laka (foto: Andrej Hirci)
1. Koper, Cathedral Church of the Assumption, Benedetto Carpaccio, Virgin and Child with Saints in natural light with test areas of the removed youngest layer of varnish (photo: Andrej Hirci)

2. Portret sv. Miklavža pri infrardeči svetlobi (IRF), ultravijolični fluorescenci (UVF) in vidni svetlobi (VIS). Izrazita so območja starih kitanj in retuš, prekrita z debelim slojem laka (foto: Andrej Hirci)
2. Portrait of St Nicholas in infrared (IR) light, ultraviolet fluorescence (UVF) and visible light (VIS). The areas of old fillings and retouchings, covered by a thick layer of varnish, can be seen clearly (photo: Andrej Hirci)

3. Na Marijinem portretu so pri IRF, UVF in VIS vidna območja, kjer manjka velik del originalne poslikave (foto: Andrej Hirci)
3. Areas where a large part of the original painting is missing are visible in Mary's portrait in these IR, UVF and VIS images (photo: Andrej Hirci)



4. Fotografija prečnega preseka vzorca z Marijinega ogrinjala. S številkami so označeni posamezni sloji: 6 – modra barvna plast, 5 – modra barvna plast, 4 – bela podloga z delci rdeče in zelene, 3 – rdeča podloga, 2 – bela podloga (foto: Katja Kavkler)
4. Photograph of a cross section of a sample of Mary's mantle. The numbers indicate the individual layers: 6 – blue paint layer, 5 – blue paint layer, 4 – white ground with particles of red and green, 3 – red ground, 2 – white ground (photo: Katja Kavkler)

5. Ultravijolična fluorescenca slike med sondiranjem najmlajše plasti laka (foto: Andrej Hirci)
5. UVF image of the painting during probing of the youngest varnish layer (photo: Andrej Hirci)

6. Infrardeča fotografija slike med sondiranjem najmlajše plasti laka (foto: Andrej Hirci)
6. IR image of the painting during probing of the youngest varnish layer (photo: Andrej Hirci)

7. Rentgenska radiografija (foto: Sonja Fister)
7. X-ray image (photo: Sonja Fister)

8. Detajl slike med odstranjevanjem izjemno temnega laka (foto: Sanela Hodžić)
8. Detail of the painting during removal of extremely dark varnish (photo: Sanela Hodžić)

9. Slika pri navadni osvetlitvi med postopnim odstranjevanjem neoriginalnih lakov (foto: Barbka Gosar Hirci)
9. The painting in natural light during gradual removal of non-original varnishes (photo: Barbka Gosar Hirci)

10. Ultravijolična fluorescenca slike med postopnim odstranjevanjem neoriginalnih lakov (foto: Barbka Gosar Hirci)
10. UVF image of the painting during gradual removal of non-original varnishes (photo: Barbka Gosar Hirci)

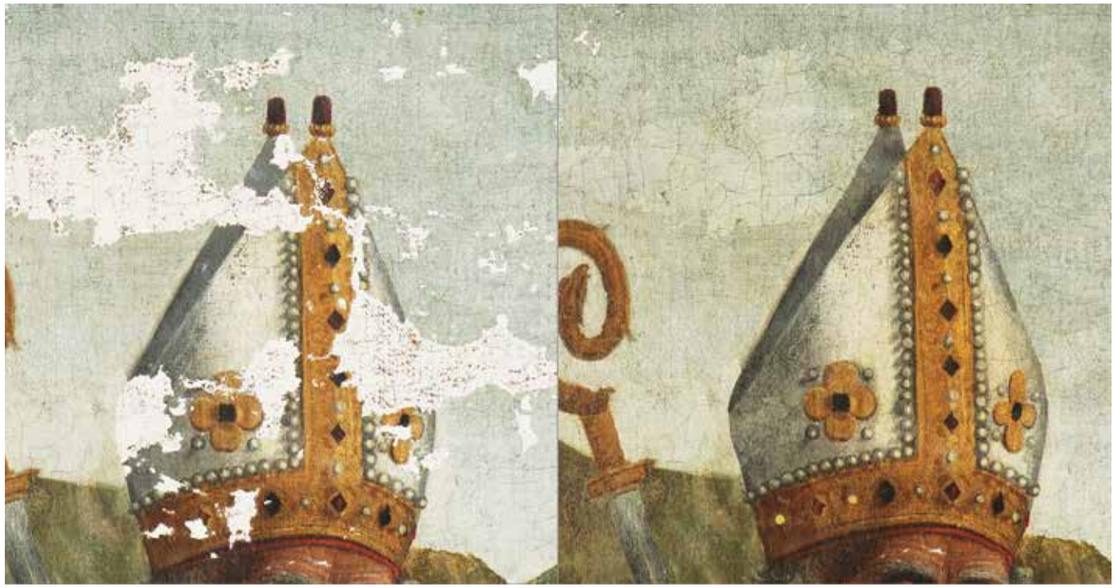
11. Mehansko odstranjevanje starih kitov, prekritih s temnimi retušami (foto: Sanela Hodžić)
11. Mechanical removal of old filler covered by dark retouchings (photo: Sanela Hodžić)

12. Strukturiranje zakitanega območja pri navadni in stranski osvetlitvi (foto: Barbka Gosar Hirci)
12. Structuring the filled area in natural and raking light (photo: Barbka Gosar Hirci)

13. Slika po končanem dopolnjevanju manjkajočih delov podloge (foto: Barbka Gosar Hirci)
13. The painting after completed supplementation of missing parts of the ground (photo: Barbka Gosar Hirci)

14. Osrednji del slike po postopku kitanja in retuširanja (foto: Barbka Gosar Hirci)
14. The central part of the painting after filling and retouching (photo: Barbka Gosar Hirci)

15. Detajl med kitanjem in prvo fazo retuširanja z gvaši (foto: Barbka Gosar Hirci)
15. Detail during filling and the first phase of retouching with gouache (photo: Barbka Gosar Hirci)



16. Detajl med kitanjem in drugo fazo retuširanja z akvareli (foto: Barbka Gosar Hirci)
16. Detail during filling and the second phase of retouching with watercolours (photo: Barbka Gosar Hirci)

17. Detajl sv. Miklavža pred konservatorsko-restavratorskim posegom in po njem (foto: Barbka Gosar Hirci)
17. Detail of St Nicholas before and after conservation and restoration (photo: Barbka Gosar Hirci)

18. Janez Krstnik pred konservatorsko-restavratorskim posegom in po njem (foto: Barbka Gosar Hirci)
18. John the Baptist before and after conservation and restoration (photo: Barbka Gosar Hirci)

19. Slika po konserviranju in restavriranju (foto: Barbka Gosar Hirci)
19. The painting after conservation and restoration (photo: Barbka Gosar Hirci)

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Conservation and restoration of Benedetto Carpaccio's painting *Virgin and Child with Saints* from Koper Cathedral

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Abstract

Documenting the condition of the works, understanding the painting technology employed and identifying earlier conservation-restoration interventions were the preliminary stages of the extensive Carpaccio project that began in 2010. The project initially included two paintings by Vittore Carpaccio from the shutters of an organ case: *The Massacre of the Innocents* and *The Presentation in the Temple*. In 2015 the project was expanded to include the conservation and restoration of Benedetto Carpaccio's painting *Virgin and Child with Saints*. The results of scientific tests, the condition of Benedetto's painting and the environment in which it was stored led to the preparation of a complex programme of conservation-restoration work. This was completed in 2018 with the hanging of the paintings on the left sanctuary wall in Koper Cathedral.

Summary

The first stage of the multi-year Carpaccio project involved documenting the condition of the works, understanding the painting technology employed and identifying earlier conservation-restoration interventions. The project initially included Vittore Carpaccio's paintings *The Massacre of the Innocents* and *The Presentation in the Temple*. In 2015 the project was expanded to include the conservation and restoration of his son Benedetto Carpaccio's painting *Virgin and Child with Saints*.

The influence of his father is strongly evident in Benedetto's painting. From him he took forms and figures, although a certain stiffness and naïveté can be seen in the scenes he painted. The painting *Virgin and Child with Saints* has been conserved and restored several times in the past. The most recent interventions were carried out in the restoration workshops of the Monument Protection Institute of the People's Republic of Slovenia between 1958 and 1961. Despite the incomplete documentation of the interventions carried out on Benedetto's painting and the materials used, we found parallels in the conservation-restoration methodology used for Vittore's organ shutter paintings and the large altarpiece *Virgin and Child Enthroned with Angels and Saints*.

The notes of the conservation-restoration commission state that all the varnishes should be preserved and that the painting should be re-varnished after the completion of conservation-restoration. Since Benedetto's painting was extremely dark in 2015, we believe that it was treated in a similar manner. The darkened varnishes, inappropriate retouchings and overpaintings have thoroughly altered the appearance of the painting. The different layers of varnish varied in age, composition, degree of degradation and distribution. A darker lower layer of varnish was found be-

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neath the lighter upper layer. The methodology was based on the separate removal of individual layers – from surface dirt, varnishes, consolidants and retouchings to overpaintings. This was followed by procedures that slowed the decay of the original support and pictorial layers. Filling and retouching concealed the damaged areas of the pictorial layers and visually connected the painted image. Conservation-restoration work on Benedetto Carpaccio's altarpiece *Virgin and Child with Saints* and his father's paintings was completed in December 2018.

Introduction

The first stage of the multi-year Carpaccio project involved documenting the condition of the works, understanding the painting technology employed and identifying earlier conservation-restoration interventions. The project initially included Vittore Carpaccio's paintings *The Massacre of the Innocents* and *The Presentation in the Temple*. In 2015 the project was expanded to include the conservation and restoration of his son Benedetto Carpaccio's painting *Virgin and Child with Saints*. The results of scientific tests, the condition of Benedetto's painting and the environment in which it was stored were the basis for the preparation of an extensive conservation--restoration programme[1] (Fig. 1).

Benedetto Carpaccio, the son of the better known Renaissance painter Vittore Carpaccio, is presumed to have been born in Venice in the early sixteenth century. In 1540 he became a citizen of Capodistria (present-day Koper) and later moved his studio, which he inherited on his father's death, to the town in Slovenia's coastal region. The narrative quality of his work is undoubtedly one of his major virtues. His paintings feature rich tonal compositions and a freshness and light that were very popular during the Renaissance. The influence of his father is strongly evident in Benedetto's painting. When painting figures, he relied on his father's cartoons, although the details are simply painted and stylised. The figures he depicted are part of the iconographic repertoire of Renaissance painting in the second half of the fifteenth century and the early sixteenth century. Benedetto's works were commissioned by religious orders and form part of the cultural heritage of Slovenia, Istria and Italy. Shortly after his father's death, Benedetto abandoned painting but continued to perform administrative duties for the town. His last dated work, from 1541, is the painting *Adoration of the Name of Jesus with Saints* from St Anne's Church in Koper (Pesenti, 1977).

Benedetto's painting *Virgin and Child with Saints* has been conserved and restored several times in the past. The most recent interventions were carried out in the restoration workshops of the Monument Protection Institute of the People's Republic of Slovenia[2] (Sitar, 2015: 30). The notes of the conservation-restoration commission from the period 1958–1961 only allow a partial reconstruction of the conservation--restoration of Vittore Carpaccio's organ shutter paintings and the large altarpiece *Virgin and Child Enthroned with Angels and Saints*, Benedetto Carpaccio's painting and *The Last Supper* from the Franciscan friary in Piran. The notes of the commission responsible for monitoring the conservation-restoration work indicate that all the paintings should be examined in natural light, infrared light and ultraviolet light and by X-ray and that chemical analyses should be carried out.[3] Responsibility for documenting the conservation-restoration process was assigned to the president of the commission and head of the restoration department, Mirko Šubic. It is evident from the existing documents what was supposed to happen with Vittore's paintings and *The Last Supper*, while in the case of Benedetto Carpaccio's painting only filling and retouching are specifically mentioned (Fig. 2). Despite the incomplete documentation of the interventions carried out on Benedetto's painting and the materials used, we found parallels in the conservation-restoration methodology used for Vittore's paintings. The notes state that all varnishes should be preserved, irrespective of the thickness and tone of the applications, and that the painting should be re-varnished after completion of the conservation-restoration work. Since Benedetto's painting was extremely dark and heavily varnished, we believe that it was treated the same way. Further evidence of this were the retouchings from that period, which were adapted to the existing dark tone of the aged varnishes. The most disturbing retouching was that on the Virgin Mary's face, done using a pronounced tratteggio technique (Fig. 3) All four paintings were also lined in that period. Since the restorers did not yet have a vacuum table, this process was carried out manually (Demšar, 1972: 37–40). Unlike that used for the organ shutter paintings, the lining compound used for Benedetto's painting contained starch, glue with a calcite filler and natural resin (Kavkler, Bešlagič, 2018). It is possible that this compound dates from the nineteenth century, when the paintings were restored in Italy. Damaged areas of the pictorial layers were filled with a filler made from a mixture of calcite, gypsum and kaolin. It was not possible to identify the binder more precisely (Kavkler, Bešlagič, 2018), but during removal of the filler we formed the opinion that it was most probably oil, the presence of which was detected in the retouching paints.

1 The tests were carried out by Katja Kavkler, Petra Bešlagič and Sonja Fister of the Scientific Department of the ZVKDS Restoration Centre and Andrej Hirci of the National Gallery. The conservation-restoration interventions were carried out by Barbka Gosar Hirci and Sanela Hodžić.

2 Heritage Information and Documentation Centre, Ministry of Culture.

3 The members of the expert commission, which was appointed on 7 February 1958, were Izidor Cankar, Boris Fakin, Božidar Jakac, Gojmir Anton Kos, France Mihelič, France Stele, Mirko Šubic, Marjan Zadnikar and Milan Železnik.

Condition of the painting

Stretcher and canvas

A good-quality stretcher and suitable storage of a painting keep the canvas taut, which enables the painted image to be optimally displayed. Although the stretcher is a secondary element, it is of key importance for the long life and stable condition of a work of art. In the case of Benedetto's painting, evidence of the existence of the original stretcher has unfortunately been lost. During the last conservation--restoration interventions, the existing stretcher, which may or may not have been the original, was in all likelihood so badly damaged that the decision was taken to replace it with a new one. Despite the relatively good construction, it was slightly deformed as a result of unsuitable climatic conditions. The wedge-shaped stretcher keys were also missing. The unprotected back of the painting was covered with dirt, while dirt had also collected in the lower part of the painting between the canvas and the stretcher bar.

In Western painting, the majority of textile supports ("canvases") are made of flax, hemp, silk or cotton. Artists rarely recorded their reasons for choosing a specific type of canvas. For the most part they used the canvases that were available on the market. In some cases their choice was conditioned by a specific weave and structure. Sixteenth-century Venetian painting mainly used twill-weave flax canvases (Young, 2012). The state of conservation of a textile support depends on stretching, impregnation, pigments, varnishes, environmental conditions and conservation-restoration interventions.

In the case of Benedetto's painting, the canvas has a dense weave. The specific diagonal lines of twill binding, which makes the surface smoother, are visible on the front. The painting measures 244 cm (height) by 177.5 cm (width) and consists of three separate pieces of canvas of different sizes that have been stitched together. The stable condition of the original support was confirmed by the results of scientific tests examining the structure and morphology of the fibres, which have retained their shape despite their age and past interventions (Kavkler, Bešlagič, 2018). A few small tears were visible at the edges of the painting, along with a slightly more pronounced area of local damage on the green rug beneath the Virgin Mary's throne, which was adequately repaired in the past by the insertion of a piece of canvas that corresponded to the original in terms of structure and weave. Since this local intervention was executed in a high--quality manner, we decided to conserve it.

The edges of the painting were secured by adhesive tape, beneath which we found numerous tacks. Some of these had rusted over the years and the rust had transferred to the original canvas. At some point in the past, minor incisions had been made in the lower corners of the original support to facilitate the stretching process. An accurate account of the condition of the support from the reverse side was difficult before conservation-restoration because the painting had been lined.

Ground and paint layer

When a painting is seen in stratigraphic section, the ground is the layer between the textile support and the paint layer. It makes the pictorial surface more solid, less absorbent, lighter or darker. A good-quality ground prevents the uneven absorption of binder from the paints, which affects their vividness, durability and stability. The colour and structure of the ground also have an important aesthetic function. Although from the technical point of view the ground is part of the mechanical preparation of the canvas, artists frequently treated the ground as an imprimatura or first layer of colour. Monochromatic underpainting that is applied directly to the ground is not considered part of the latter but as a first application of colour through which the painter influenced the expressiveness of the painted design (Stols-Witlox, 2012).

The stratigraphic section of the pictorial layers of Benedetto's painting revealed an extremely interesting multi-layer ground (Fig. 4). We can assume that Benedetto chose this method of preparation of the support out of a desire to create a smooth and light pictorial surface. The support is heavily impregnated in thick layers. The first layer of the ground is of gypsum and glue. This is followed by an isolation layer of indeterminate composition. Above this is a reddish layer of vermilion, gypsum and calcite. The last, brown layer contains vermilion, gypsum, calcite, burnt ochre, burnt sienna, green earth and haematite. The red and brown layers are completely separate in places, while elsewhere they blend into each other, which we may attribute to the method of application. It may be that the brown layer was applied to the fresh red layer, resulting in intermingling in places. Traces of oil are present in both layers, although the cause of this was very difficult to prove, above all because of past conservation-restoration interventions. It may be that the oil is a residue of the impregnation layer, or it may be that the ground was actually oil-based. The red and brown layers can be defined as ground, while the two light layers above them can be understood as underpainting. Directly on the brown layer is a white layer of lead white and green earth. This is followed by a layer of lead white, vermilion and calcite. The binder in the white layers is oil (Kavkler, Bešlagič, 2018). The light layers of underpainting are what give Benedetto's painting its fresh effect.

Pigments are combined with a binder to create a homogeneous layer. In order to better understand why a painter used specific pigments and binders, it is necessary to find a connection between them. The physical and chemical effect of oil on pigments is different from that of gum arabic or egg. Just as with the preparation of the ground, the way in whi-

ch oil is used in painting technique differs greatly between northern and southern European countries. The transition from the use of glue and egg to oil took place gradually, so it is not surprising to find that many painters used both techniques in individual works. It has been proved that they used an egg-based binder for flesh tones and added oil to darker red, brown, green and blue tones. In this process, differences naturally also occurred in the saturation of an individual layer and, consequently, the brilliance of the surface. Because of the oil, darker tones had a deeper and darker effect (Hermens, Townsend, 2012).

In Benedetto's case the binder is oil. The results of scientific tests showed that the design is painted in one to four paint layers (Kavkler, Bešlagič, 2018). The white tones are of lead white and calcite. Lead white is one of the most important pigments in painting and was the only white pigment right up until the nineteenth century. It is an intense pigment that creates a strongly saturated paint layer and was therefore used for underpainting and for highlighting light reflections. In the case of the painting under consideration, lead white is present in the light layers of underpainting, on the Virgin Mary's throne, in St Nicholas's drapery and in the sky area. The red tones are painted with vermilion, while madder is used for the glazes on Mary's drapery. A combination of lead white and vermilion is present in flesh colours. The painter painted yellow shades using Type I lead-tin yellow and litharge. Lead-tin yellow is present in St Nicholas's red cope, the rug beneath Mary's feet, the trees and the background. In combination with vermilion, litharge is present in Mary's red drapery. The blue tones are painted using azurite and ultramarine. Azurite is the most important blue pigment in Renaissance painting, although in terms of popularity it was overshadowed by the more precious ultramarine. In the fifteenth and sixteenth centuries it was often used as an underpainting for ultramarine, as was demonstrated to be the case in Benedetto's painting. It is used in the green shades of the trees and other vegetation in combination with lead-tin yellow. Ultramarine was present in the painting of the fourteenth and fifteenth centuries, at which time it formed part of a "venerated trinity" of pigments together with vermilion and gold. Since Carpaccio came from a well-known and well-established Venetian family, this precious pigment was accessible to him without major difficulties. Charcoal is a stable pigment and the painter added it to lead white in the architectural elements. A significant quantity is also present in the green rug beneath Mary's throne.

The chromaticity of pigments is at its most intense when a painting is created but later changes as a result of a variety of factors. Chemical reactions between individual materials, which can be caused by environmental and other factors, have the effect of fading or darkening the colours used. In the case of Benedetto's painting, some areas are decidedly dark, almost black. They were certainly not like this when the picture was painted. It is worth highlighting the green rug beneath Mary's throne and the dark brown tone of the vegetation and trees in the landscape, which were undoubtedly originally painted in green tones. Cracks in most cases serve as information that allows us to assess the quality of the painting technology employed and study the history of a painting. Their formation can be attributed to painting technique, the ageing of the materials, an unsuitable environment or a range of mechanical factors. The cracks visible in Benedetto's painting are mainly age cracks, which are a natural phenomenon, and were stable.

Cennino Cennini observed in the fourteenth century that varnish is a powerful substance. He recognised the quality of the transparent liquid that emphasises the chromaticity of colours and at the same time protects them. Although varnishing was already an established practice in medieval painting, precise details about varnishing practice and formulas are extremely scarce (Goltz, Proctor, Whitten, Mayer, Myers, Hoenigswald, Swicklik, 2012). We did not find original varnish on Benedetto's painting. The presence of a more recent layer of alkyd or polyester varnish was proven. Beneath it we found older dammar varnish (Kavkler, Bešlagič, 2018). We do not know what type of synthetic varnish was used, but restoration notes exist from which it is possible to deduce that the synthetic resins AW2 and MS2B were used in combination with dammar in the 1960s (Kokalj, 1972: 94). The varnishes on Benedetto's painting were very dark, brown and unevenly applied. In the lower part of the painting, above all in the area of light colour tones, some swelling of the varnish was noticeable – the consequence of uneven and incautious application.

Conservation and restoration interventions

Technical photography

Beginning in the nineteenth century, scientific approaches that enable us to see into the "interior" of a painting started to establish themselves in the field of art. Through the use of various investigative techniques, it is possible to uncover hidden details about the artist's method of work which often serve as key information for the identification of authenticity and a deeper understanding of the artist's message (Saunders, 2012). Technical photography today occupies a leading role and is indispensable for the better understanding of the structure, evolution and condition of a painting. It involves photographing paintings in ordinary, ultraviolet and infrared light.

One of the most useful techniques is the thorough and careful examination of a painting using a good source of visible light (VIS), a technique we also used to examine and photograph Benedetto's painting (Fig. 1). We obtained information about the morphology of the surface by illuminating the painting from a light source at an oblique angle. This is known as raking light (RAK). Ultraviolet fluorescence (UVF) photography is one of the most important but at the same time one of the cheapest investigative techniques. Rays of ultraviolet light are reflected back from a surface and the materials that react to them create a contrast or "fluorescence" that provides a range of information that must then be understood and correctly interpreted. We found that a thick layer of oxidised varnish and dark areas of old retouchings lie above the paint layers on Benedetto's painting (Fig. 5). We also used the method when removing all the layers of varnishes, retouchings and overpaintings. Infrared (IR) photography is essential in establishing the authenticity of the work of art, detecting underdrawing, identifying the artist's skill in composition and anatomy and determining the scope of earlier interventions on the pictorial layers. This investigative method is more successful in the case of paintings whose ground is white and not coloured with earth pigments, such as was the case in our painting. In our case we were able to observe drawing in St Nicholas's drapery with the naked eye, although we also documented it appropriately by means of infrared photography (Fig. 6). The lightness of Benedetto's ground also influenced the tone of the X-ray image. A painting that contains a large amount of lead white in combination with other pigments appears lighter in X-ray images (Fig. 7).

Removal of darkened varnishes and retouchings

At the abstract level, when cleaning paintings and removing varnishes, retouchings and overpaintings it is necessary to find a balance between risk and benefit (Bomford, 2012). As a result of darkened varnishes, retouchings and overpaintings, the appearance of Benedetto's painting was thoroughly altered, so the removal of non-original layers was a complex and demanding process (Fig. 8). In practice the options available are a full intervention, a partial intervention and a selective intervention. The choice of appropriate methodology is conditioned both by the current state of the original and by the restorer's expertise and ethical sense. In no case must the intervention affect the natural ageing of the original (Phenix, Wolbers, 2012).

The varnishes were applied to Benedetto's painting in several layers and differed in terms of age, composition, degree of degradation and distribution. A darker lower layer of varnish was found beneath the lighter upper layer. The methodology of total removal of non-original layers was in our case based on the separate removal of surface dirt, varnishes, consolidants, retouchings and overpaintings. Although it is possible in practice to find an effective solvent, we avoided this approach. Instead we opted for a progressive and selective approach that gave us a choice of specific solvents for each individual coat.

A thick layer of surface dirt was present on Benedetto's painting. This was most pronounced in the upper part of the decorative frame. Mechanical dust removal was followed by the chemical removal of surface dirt from the face of the painting. We cleaned the surface of the stable paint layer with an aqueous solvent[4] This was followed by solubility tests that enabled us to study options for the removal of non-original varnishes, darkened retouchings and overpaintings.

In conservation-restoration practice, testing means verifying the effectiveness of various solvents on the materials we wish to remove. This is carried out on small, unobtrusive sections of the painting, which facilitates safer execution. Solubility testing should ideally be carried out on light colour tones, which are less sensitive than reds, greens, blacks and browns. The quality of testing is the result of expertise and technical execution, which is visible in both the physical and chemical senses. When removing old varnishes, retouchings and overpaintings, it is a good idea to prepare a detailed chart of mixtures of polar and non-polar solvents. These are mixtures in which the polarity gradually increases in precisely determined proportions. The testing process involves verifying their impact on the layers that are to be removed, and on the original painting. White spirit, xylene, *n*-butyl acetate, propanol, acetone and ethanol are the most common solvents used in the preparation of such mixtures. The Keck, Rabin, Pomerantz and Ruhemann solubility tests include solvents that are today considered harmful. The more recent Wolbers and Cremonese tests exclude toxic solvents and propose mixtures made from combinations of isooctane or Shellsol T and acetone, isooctane or Shellsol T and ethanol, and acetone and ethanol.

In the case of Benedetto's painting, for our attempts to remove the youngest coating of varnish we used the Cremonese test, for which we prepared mixtures of isooctane, acetone and ethanol. The essence of cleaning is to use solvents that will have an adequate effect on the substance that needs to be removed without damaging the original. The use of a solvent that can be modified is recommended. To remove the youngest varnish and earliest retouchings, we used a tested mixture of isooctane and ethanol[5] (Fig. 9). Removal was done gradually across the entire painting and the quality of execution was verified using ultraviolet light, which we documented photographically (Figs 9 and 10).

Underneath the removed younger varnish we found unevenly applied dammar or mastic varnish. Even freshly prepared dammar varnish is partially oxidised and contains components that have a certain acidity, although with ageing its solubility reduces. In standard restoration practice, rectified turpentine is used to prepare the dissolution of dammar resin, and in our case oil may have been added to it. Owing to past interventions, ageing and uneven distribution, the older varnish was harder to remove. We tried various mixtures of solvents, including more polar mixtures, but

4 0.2% mucin, 0.2 g triammonium citrate, 100 ml distilled water.
5 40 ml isooctane and 60 ml ethanol.

none was successful. We continued testing with solvents in the form of gels and emulsions. Gels are viscous, which means that it is possible to regulate their action over time. They are frequently used to remove stubborn old varnishes, retouchings and overpaintings. They are prepared from a solvent, a thickener and a surfactant. For our painting we tried a benzyl alcohol gel.[6] Using this we had some success in removing the stubborn old varnish, but since it would have been necessary to repeat the process several times in the same place, this meant a certain risk for the original, so we decided to look for a more suitable method.

In standard practice we often use wax soap to remove more complex layers, so we decided to try this on Benedetto's painting.[7] Testing on small light areas showed this to be a successful choice. We applied it to the surface with a brush via a thin piece of special paper that acted as both interface and blotter and made it easier for us to remove both the wax soap and the dissolved varnish. Although we tried hard to ensure that the removal was even, some dark stains, which had eaten into the paint layer, remained in the lower light part of the painting, where significant swelling of the varnish was visible. We tested the action of various mixtures of non-polar and polar solvents, which we prepared using the Wolbers method, but all were too aggressive. A mixture of Shellsol T and acetone proved to be partially successful.[8] Some stains had completely bonded with the original paint layer, so we subsequently removed them mechanically using a scalpel with the smallest blade available. We carried out the process extremely carefully using magnifying glasses and light physical force, and using ultraviolet light to check our progress as we went.

After removing the dark non-original layers of varnish, we removed the old filler (Fig. 11). Larger filled areas were present on Mary's face and St Nicholas's mitre and in the background. Brittle old filler, which was covered by retouching, was removed mechanically using a scalpel with a small blade. We were particularly careful at the points of contact with the original. Once the filler had been removed, a thick layer of red ground was clearly visible at the edges of the original painting. White underpainting was also partially visible. The damaged areas were filled with old glue, which because of its poor compatibility with the filler compound had prevented a good bond with the support. For this reason the filler was significantly easier to remove. It was also interesting to note that the cracks of the pictorial layers were impressed in the glue, which we may attribute to conservation-restoration processes in which heat and pressure were used.

6 100 ml benzyl alcohol, 15 ml distilled water, 20 ml Ethomeen C-25 and 2 g Carbopol 940.

7 We made this according to the recipe of restorer Miha Pirnat Sr, a member of the team that restored Benedetto's painting in the 1960s. We made the wax soap from 1 litre distilled water, 100 g bleached beeswax and 40 g ammonium carbonate with a pH of 10.

8 In a ratio of 3 parts Shellsol T to 1 part acetone.

Conservation of the support and pictorial layers

Paintings are constructed of various materials with a characteristic chemical composition and specific physical properties. A range of factors can cause different types of damage to the pictorial layer: separation of the ground from the support and/or of paint from the ground, cracks, powdering of pigments, weakening of binders, flaking and peeling. Through consolidation we halt the decay of the materials and re-establish the bonds between them, in this way conserving the original. The choice of consolidant and scope of the intervention is affected by the conditions of storage, the condition of the painting and its structure, earlier interventions and consideration of all subsequent procedures. The most widely established principle in conservation-restoration is the principle of reversibility. In the case of consolidation, reversibility is difficult to establish, given that we want the materials in the painting to remain bonded and stable (Golz, Birkenbeul, Horovitz, Blewett, Dolgikh, 2012). Through consolidation of the front of Benedetto's painting, we stabilised the damage on the edges and prevented the potential formation of new damage during the interventions that followed: removing the painting from the stretcher, removing the lining canvas and thinning the old adhesive. We applied heated consolidant[9] with a brush to the front of the painting via small pieces of special paper. Our choice of specific material was dictated by years of experience, the condition of the work and the storage environment. Once the solvent from the consolidant had completely evaporated, we removed the painting from the stretcher and continued the consolidation process on a low-pressure table under regulated pressure and at a controlled temperature. The weakened pictorial layers were thus consolidated and bonded.

As has already been mentioned several times, the painting was lined during a past intervention. Because lining was done manually, as was the practice at the time, it was not possible to distribute the adhesive completely uniformly across the entire surface. A significant quantity of the adhesive had in places penetrated through the lining canvas and was reflected on the back in the form of darker stains. After removal of the painting from the stretcher, we removed the dirt on the back and continued with the removal of the lining canvas. Making incisions along the edges as far as the original support, we cut the lining canvas into strips approximately 30 cm wide and then one by one peeled them carefully off the back of the painting at an acute angle. This approach enabled the safe removal of the non-original canvas, since we only employed light force. Before commencing the process, we weighted the painting enough to stop it from moving.

Beneath the non-original canvas was a thick layer of old adhesive. On the basis of experience and the composition of the material, we decided to remove it using scalpels and heat. We applied heat to the surface using a special restoration blower that allows regulation of power and temperature. We also tested removal by moistening, but this would have caused too much damage to the fibres. The use of warm air was more controlled and more effective. Areas of local repair and seams had been additionally consolidated in the past with paper, which we removed together with the adhesive. We were only able to partially remove the adhesive from the impregnated support. The residual adhesive will remain between the threads and fibres until the invention of a more suitable method.

9 10% BEVA 371 in white spirit.

A range of methods of local repair exist in conservation-restoration practice that signify minimal intervention on the textile support, although even in these cases the compatibility of materials is extremely important. The process requires the preliminary preparation of the painting, consolidation of damaged sections and final stabilisation of the work of art (Heiber, Tomkiewicz, Scharff, Levenson, 2012). In the case of Benedetto's painting we used two types of local repair. The first involved inserting small pieces of canvas into holes and the damaged lower corners of the painting, while the second consisted of stabilisation of tears and seams. We replaced the missing parts of the original support with a structurally similar flax canvas. We inserted carefully prepared pieces into the holes in the original support and fixed them on the back with an adhesive film and special paper.[10] The procedures carried out did not, unfortunately, ensure the complete stability of the original support, so we decided to reline it following a methodology that we have been using for a number of years in similar cases (Hodžić, Gosar Hirci, Pečak, 2017: 90–106). One of the fundamental requirements for the good condition of the support and pictorial layers is a well-made stretcher. For Benedetto's painting we selected a wooden stretcher with a system that enables constant tension of the stretcher, protects the back of the painting from dirt and regulates the negative effects of damp (Gosar Hirci, 2007: 25).

Supplementation of missing parts of the pictorial layers

Filling can be divided into three phases: application, levelling and texturing. The correct choice, application and structuring of the material affect the quality of the visual unification of damaged areas, since retouching is not in itself sufficient to re-establish the connection between the missing sections and the original (Fuster-López, 2012). The types and characteristics of missing sections can vary considerably. If the ground is missing as well as the paint layer, as was the case with Benedetto's painting, this requires total reconstruction of the ground and paint layer.

10 BEVA patch made from BEVA® 371 adhesive film and Lens Tissue L2 special paper.

The use of the correct methodology is important for good-quality filling. This begins with the adequate preparation of damaged areas. Cleaning, consolidation and isolation enable a good bond between original materials and new materials. When filling is done in areas with gaps and holes, these first need to be prepared, which is what we did in the case of Benedetto's painting. By inserting new canvas into the missing sections of the original support, we avoided excessive thickness of the applied material and reduced the possibility of splits occurring.

In order to supplement the ground, we selected a traditional filler compound made of Bologna chalk and rabbit-skin glue. In the past, Venetian turpentine was added to this compound in order to increase the viscosity of the filler. In our case, however, we added a small quantity of bleached linseed oil. When the original ground is coloured, earth pigments are added to the filler compound. In our case, we avoided this because of the specific white underpainting. The majority of water-based fillers contract during the drying phase, so we applied a slightly larger quantity of material. We structured the filled sections in two phases. First we adjusted the level, then we drew in various patterns of cracks and imitated the brushstrokes and other surface characteristics of the original. Adjustment of level was done using slightly moistened cotton swabs, small cotton pads and corks. We then used a thin filler compound to imitate brushstrokes on the levelled surface. We used small-bladed scalpels and sharp modelling knives to draw in the networks of cracks that were present in the original. When it came to structuring, we were greatly aided by the illumination of the working surface with raking light (Fig. 12). To this end we used small LED spotlights that enabled us to examine the areas we were working on from different sides. The raking light accentuated the structure and irregularities of the surface and was one of the key factors that allowed high-quality execution. Using the methodology described, we attempted to approach the original structure of the pictorial layer as closely as possible and prepare it for the last major process – retouching (Fig. 13).

Painters create the impression of perspective, colour and texture on a two-dimensional surface. Out of respect for the painted design, retouching must be objective and must avoid erroneous aesthetic, conceptual and physical information. Although the restorer's interpretation of an artist's work will always be subjective, retouching must not cover the original. Systematic retouching from smaller to larger enables a gradual and in-depth understanding of the work of art. Physical damage weakens the connection between the colour tones, which in the case of Benedetto's painting has led to loss of information about the details in the portrait of the Virgin Mary, Saint Nicholas's mitre, the sky, and so on (Fig. 14). When missing sections occupy a large portion of the painting and information and shapes are entirely lost, it makes sense to consider reconstruction. For this to be carried out appropriately, however, suitable information needs

to be found, for example from similar works by the same artist, old reproductions of photographs from a time when the painting was in good condition, and so on. We were greatly aided by the old retouchings, which closely matched the original in terms of design but stood out negatively because of the pronounced tratteggio and dark colours. Every conservation-restoration intervention, including retouching, must be suitably photographed in various types of lighting before, during and after execution, since this will be an important source of information in the future (Digney-Peer, Thomas, Perry, Townsend, Gritt, 2012).

Alongside execution, the choice of suitable pigments, binders and solvents, which must guarantee compatibility, reversibility and stability, is extremely important when retouching. In the case of Benedetto's painting, we carried out retouching in three phases using various materials. First we created a foundation using gouache. This is a technique that is very similar to watercolour, only that white chalk is added to the paints, which gives them brightness and better coverage. We covered all the filled sections and also those sections in which the paint layer was worn down to the ground, while observing the smaller-to-larger principle. We used lighter and slightly cooler tones, imitating the brushstrokes and the directions of application. In some places several applications were required, since this was the only way to achieve saturation of colour tones. In this way we created a foundation for the final retouching (Fig. 15). Even before starting the retouching process we had decided that we would give the painting a final varnishing, so we continually checked the quality of execution as we went along. Gouache paints become darker after varnishing, so we wet the retouchings slightly with white spirit. In this way we temporarily obtained the tone that the retouchings would acquire after varnishing.

After the first phase of retouching with gouache, an intermediate coat of varnish is usually applied. In the case of Benedetto's painting, we decided to continue the retouching with watercolours without an isolation layer of varnish. We chose this technique because of the overall brightness and airiness of the painting and the possibility of accurately drawing the cracks and other age-related characteristics of the original paint surface (Fig. 16). We used a minimal amount of water and in this way avoided dissolving the gouache below. We supplemented very pronounced brushstrokes with a tratteggio technique, while we painted in some missing sections directly, although in lighter tones than the originals. There are a large number of details, gentle colour transitions and tiny brushstrokes in the painted figures, and the use of watercolours allowed us to get close to the artist's own artistic expression without major difficulties. The choice of watercolour made reconstruction on Mary's face and St Nicholas's mitre easier and more precise. As regards the design, we relied on the retouchings of our predecessors. In this case, too, we wetted the surface from time to time with white spirit. In this way we developed a feeling for the tone that the retouchings would acquire after varnishing and verified the correctness of execution. If it seemed to us that the quality of the retouching in a given area was inadequate, we carefully removed it and repeated the process. The reversibility of water-soluble paints is one of the positive characteristics that made our work significantly easier. Once we were satisfied with the results of the second phase of retouching, we varnished the painting.[11]

The third and final phase of retouching consisted of glazing with factory-made synthetic-resin-based paints,[12] which we thinned with an aromatic solvent.[13] In order to achieve the transparency of specific glazes, we added a medium to the paints.[14] We regulated the brilliance of the retouching by adding the same varnish used for the intermediate varnishing. We retouched the light parts of the sky, Mary's face, the body of the baby Jesus, Saint Nicholas's mitre and alb, Mary's throne and the lower steps using transparent glazes that enabled us to imitate the yellowish tone of the old varnish residues. We used thicker paints to paint the age stains. Several transparent applications were necessary in the darker sections. The dark areas of paintings are less saturated than lighter areas and therefore brownish glazes mattify more quickly. We prevented this by adding small quantities of varnish. Using this methodology, we came close to the original and reintegrated damaged areas while respecting the artist's painting and the characteristics of a work of art that is half a millennium old (Figs 17 and 18).

Varnishing affects the optical and aesthetic appearance of a painting and at the same time has a long-term positive effect on its condition. On the basis of the individual treatment of each individual work of art, the restorer decides whether varnishing is necessary and, if so, to what extent. In some cases, because of specific characteristics or the artist's wishes, the decision may be taken to avoid varnishing. When dealing with a badly damaged painting, such as was the case with Benedetto's, which had also undergone conservation-restoration several times in the past, it is impossible to reconstruct the original varnish. In practice it is possible to research its material composition, but not its tone and shine. Today the use of clear and transparent varnishes is recommended. These allow adjustment when recreating the brilliance and saturation of the paint layer. Both natural and synthetic varnishes are available on the market. The choice of varnish is conditioned by the state of the original, the restoration materials used and the storage environment. Resins, solvents and additives must be precisely chosen, and the quantity and method of application are also important. Dammar varnish was the first varnish developed for the purpose of painting restoration. Its polarity changes over the years but it generally remains soluble (Goltz, 2012: 639).

11 We prepared the varnish from double-rectified turpentine and dammar resin in a ratio of 3 : 1.
12 Gamblin Conservation Colours, Kremer Pigmente GmbH & Co.
13 Shellsol, A., Kremer Pigmente GmbH & Co.
14 Galdehyde Resin Medium, Kremer Pigmente GmbH & Co.

Dammar varnish offers good protection for the paint layer of Benedetto's painting, since it has numerous positive characteristics and we have a lot of experience with it. Despite consolidation, the badly damaged painting was porous and dull. After the first varnishing, the shine was uneven and entirely matt in places.[15] We carried out the final varnishing in the varnishing workshop with a spray gun using a modified varnish.[16] We applied the lightly heated varnish twice, first horizontally and then vertically, across the entire surface. The varnish was allowed to dry fully between the individual applications. In the case of very badly damaged old paintings such as Benedetto's, it is only possible to achieve complete saturation of the surface and an even shine through the multiple application of varnish in thin coats (Fig. 19).

Conclusion

Decorative frames are aesthetic addition that also protect paintings during transport, exhibition and storage. Benedetto's painting has a solid wood profiled frame with a gilded inlay, but this was damaged, unstable and unsuitable.[17] Although the frame is not original, we conserved and restored it and fitted it with a new inner frame. We covered the inner edge of the decorative frame with adhesive tape that will protect the edge of the painting from scratches. The painting is fixed in the decorative frame by special screws and ten wooden boards that enable us to create a gap between the inner edge of the decorative frame and the painted surface. To facilitate the hanging of the painting, we attached two strong metal elements to the upper part of the frame, one on the left and one on the right, at the height of the base of the semicircle. Two wooden spacers were fixed to the lower part. The painting is hung on the wall by means of specially made metal elements which, together with the wooden spacers, create a gap between the wall and the back of the painting. This reduces the direct influence of damp and dirt and at the same time allows air to circulate behind the painting.

The conservation-restoration work on Benedetto Carpaccio's altarpiece *Virgin and Child with Saints* and Vittore Carpaccio's organ shutter paintings was completed in late 2018. Benedetto's painting is presented on the left wall of the sanctuary in Koper Cathedral between the two organ shutter paintings.[18] The conservation and restoration of Benedetto's painting revealed to us a wealth of interesting details about painting technology. Beneath the darkened varnishes, a painted design of extraordinary freshness was revealed. Although Benedetto is somewhat clumsier than his father Vittore in certain painted details, the painting glows with an illustrative, colourful narrative power. The colour harmony of Mary's blue dress, the rug below her throne and St Nicholas's cope has an almost abstract effect owing to the naïve perspective. It is also worth drawing attention to the precisely painted portrait of St Nicholas in his bishop's vestments. There is no question that the conserved and restored trinity of Renaissance paintings forms an interesting artistic composition that enhances a historic sacred space in Slovenia's coastal region.

15 See note 11.
16 We prepared the mixture from 1000 g double-rectified turpentine, 160 g dammar resin, 5 g Tinuvin 292 and 16 g bleached beeswax.
17 The conservation-restoration interventions on the decorative frame were carried out by Nuška Dolenc Kambič, Nadja Podboj, Nuša Saje and Tina Vrenko.
18 Mounting was carried out at the Restoration Centre by a technical team consisting of Marko Brisenhorn and team leader Janez Novak.

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Konserviranje-restavriranje stropne poslikave Riharda Jakopiča na oboku uvozne veže v Meksiki

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Izvleček

Stropna poslikava Riharda Jakopiča na oboku uvozne veže v večstanovanjski hiši v Ljubljani, ki je bila zgrajena za uslužbence Mestne občine ljubljanske leta 1927, t. i. Meksiki, je edino tovrstno impresionistično delo v slovenskem prostoru, ki je neposredno dostopno javnosti. Z arhitekturno zasnovo stavbe Vladimirja Šubica in kipoma Lojzeta Dolinarja na vhodnem portalu se povezuje v harmonično celoto. Slikar je, preden se je lotil obočne poslikave z delavsko in socialno tematiko, pripravil številne predloge v različnih tehnikah in preučeval impresionistični vtis šestih prizorov, ki jih je zasnoval kot odmev na družbene razmere v času med obema vojnama. Leta 2007 so bile za potrebe izdelave konservatorsko-restavratorskega projekta celostne obnove zunanjščine izvedene prve sondažne raziskave. Do prvega konservatorsko-restavratorskega posega je prišlo šele leta 2019, čeprav je bilo propadanje poslikave vidno že kmalu po njenem nastanku in je bilo javno odmevno. V ta namen so bile izvedene nove, podrobnejše naravoslovne raziskave barvne plasti in ometov poslikave, ki so poleg že znanih podale še več možnih vzrokov njenega propadanja. Sledili so poskusi utrjevanja in meritve uspešnosti utrjevanja. Vpogled v dobljene rezultate raziskav, analiz in poskusov na testnih vzorcih ter *in situ* nam je narekoval izbiro materialov za izvedbo posega, pri čemer smo se držali principa minimalnosti, in to tako pri vnosu utrjevalnih sredstev kot pri izvedbi končne prezentacije – izvedbi retuše. Ohranjanje avtentičnosti Jakopičeve poslikave je bilo tako doseženo v največji možni meri.

Uvod

Naraščanje števila prebivalstva v Ljubljani po prvi svetovni vojni je povzročilo porast stanovanjske gradnje, na katero je v veliki meri vplival t. i. Rdeči Dunaj z reševanjem stanovanjskega in drugih socialnih vprašanj z modelom večstanovanjske gradnje, katerega cilj je bil izboljšati življenjske razmere delavcev in sploh demokratizirati njihovo življenje na različnih področjih. V gradnjo velikih stanovanjskih stavb v tem obdobju so bili v Ljubljani vključeni vodilni arhitekti tistega časa, med njimi Vladimir Šubic, ki je kot pooblaščeni arhitekt Pokojninskega zavoda načrtoval za tisti čas visoko kakovostno stanovanjsko gradnjo v slovenskem prostoru. Poleg dviga stanovanjske kulture je bila velika pozornost namenjena tudi vsestranskemu kulturnemu življenju delavskega človeka, ki se je med drugim izražalo tudi v upodobitvenih umetnostih v sklo-

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pu načrtovane gradnje. S sodelovanjem takrat priznanih slovenskih kulturnih ustvarjalcev arhitekta Vladimirja Šubica, kiparja Lojzeta Dolinarja in slikarja Riharda Jakopiča je bila z gradnjo večstanovanjske stavbe za uslužbence Mestne občine ljubljanske, t. i. Meksike, ustvarjena celostna umetnina. V času nastanka je poslikava zaradi svoje monumentalnosti in likovnega izraza pritegnila veliko pozornost umetnostnozgodovinske stroke, vendar so zaradi propadanja poslikave *in situ* večjo pozornost vzbujale njene ohranjene predloge. Poslikava, na kateri vse do leta 2019 ni bilo izvedenih konservatorsko-restavratorskih posegov, je zaradi v veliki meri propadle barvne substance pomenila velik izziv za konservatorsko-restavratorsko stroko. Cilj posega je bila ohranitev Jakopičeve poslikave v največji možni meri. Zaradi slabe ohranjenosti prvotne barvne zasnove, ki skoraj ni bila več berljiva, bi bil vsak poskus barvne rekonstrukcije bistven poseg v Jakopičevo delo. Z naravoslovnimi preiskavami uporabljenih materialov so bili pridobljeni pomembni podatki o njihovi sestavi ter občutljivosti za različne dejavnike, s poskusi utrjevanja pa so se ugotavljali optimalni učinki na prvotno substanco. Z rabo v veliki meri reverzibilnih gradiv in z minimalno retušo je bilo v največji možni meri doseženo ohranjanje avtentične Jakopičeve poslikave ter s tem izraženo spoštovanje do umetnikovega dela.

Zgodovinski okvir nastanka poslikave

Mestna občina ljubljanska vse do druge polovice tridesetih let 20. stoletja ni načrtno oz. aktivno reševala naraščajočega problema pomanjkanja stanovanj v mestu. Izjema so bile velike stanovanjske hiše na robu mestnega središča. Mestni gradbeni urad je skorajda hkrati postavil dva večja stanovanjska bloka, t. i. Meksiko in Rdečo hišo, ki sta pravzaprav repliki t. i. dunajskih Hofov. Mestna občina ljubljanska je od svojih arhitektov[1] zahtevala, naj si »za vzor vzameta velike stanovanjske bloke, ki so jih v veliki povojni gradbeni aktivnosti gradili na Dunaju« (Zlodre idr., 1992: 12). Stanovanjsko vprašanje s ciljem izboljšati življenjske razmere delavcev in demokratizirati njihovo življenje je bilo v katastrofalnih razmerah po prvi svetovni vojni eno izmed največjih izzivov, in sicer kako oblikovati stanovanjsko politiko s poudarkom na področjih, kot so socialna vloga žensk, delavska kultura, izobraževanje in vzgoja otrok, umetnost, kakovostno preživljanje prostega časa in preventiva z zagotavljanjem visokih higienskih standardov.

Cilj socialnega stanovanjskega programa je bil torej ustvariti boljše bivalne razmere ter boljši zdravstveni in izobraževalni sistem za delavski razred. Vsi ti dejavniki so spodbudili tudi nov pristop k oblikovanju stanovanjske arhitekture. Arhitekt Vladimir Šubic se je pri gradnji stanovanjske hiše Meksika oprl na zasnovo dunajskega večstanovanjskega bloka Fuchsenfeldhof, zgrajenega po načrtih arhitektov Heinricha Schmida in Hermanna Aichingerja v obdobju 1922–1925 v dunajskem okrožju Meidling. V bloku Fuchsenfeldhof so bili poleg več kot štiristo stanovanj v večtraktnem kompleksu z notranjimi dvorišči tudi centralna pralnica, kopališče, otroški vrtec in knjižnica. V skromnejši različici ljubljanske Meksike je bilo zgrajenih več kot osemdeset stanovanj z vsemi sodobnimi higienskimi standardi, dopolnjevala pa sta jih javno kopališče in skupna javna pralnica. Arhitekt je za prehod s ceste na dvorišče predvidel veliko obokano vežo z likovnim okrasom. Naročilo za izdelavo kipa moškega in ženske oz. matere in očeta na portalu veže je bilo zaupano kiparju Lojzetu Dolinarju, k poslikavi oboka veže pa je Mestna občina ljubljanska povabila slikarja Riharda Jakopiča. Ta je leta 1929 v časniku Dom in svet zapisal: »Ne vem prav natančno, kako da so se gospodje na magistratu pri tem spomnili ravno name. Gotovo pa se ne bom motil, če pravim, da se je ta misel porodila v glavi g. arh. V. Šubica … Zdi se mi dalje, da je imel besedo pri tem še neki drugi gospod in njegova je končno obveljala.« (Jakopič, 1929: 31) Ta gospod naj bi bil univ. prof. Jože Plečnik, ki je Mestnemu gradbenemu uradu predlagal, naj se poslikava naroči akademskemu slikarju Rihardu Jakopiču.[2] Ker je Jakopič jamčil za najvišjo umetniško kakovost, je Mestni gradbeni urad vladnemu komisarju predlagal, naj se naročilo za slikanje oboka odda slikarju Rihardu Jakopiču (Podbevšek, 1983: 384).

Poslikava oboka je bila za slikarja svojevrsten izziv, saj je bil sicer primarni nosilec njegovega ustvarjanja slikarsko platno. Jakopič je naročilo za poslikavo na oboku prejel v času gradnje hiše, 21. maja 1927, medtem ko naj bi bil omet na oboku končan konec julija. Z izdelavo poslikave je zamujal in se je dela na oboku lotil šele sredi septembra, konec oktobra pa so bile predloge končane v celoti in v posameznih šestih skupinah.[3] Na obok so bile do takrat prenesene tri kompozicije, deloma že poslikane. Jakopiču je pri prenašanju osnutkov na obok pomagal slikar France Pavlovec (Mikuž, 1958: 868). Na začetku decembra 1927 je bila kompozicija v celoti na oboku, zrisana in poslikana, s čimer sta bili dve tretjini dela končani.[4] Zaradi neprimernih vremenskih pogojev je moral Jakopič nato prekiniti poslikavo oboka. Njegovi prošnji, naj bi delo nadaljeval šele spomladi, naročnik ni ugodil z utemeljitvijo, da mora biti veža poslikana, preden se v hišo vselijo stranke.[5] Poslikava je bila nato dokončana šele v drugi polovici novembra 1928.[6] »Naključje je hotelo, da je še mokri omet na oboku – na katerega je moral na pritisk z mestnega magistrata slikati, začel že prvo leto po izdelavi razkrajati barve, da so vedno bolj bledele. Ta razkroj je proti koncu njegovega življenja zavzel že tak obseg, da je bila ›izpolnitev dolgih pričakovanj slovenske umetnosti‹, kot je zapisal dr. France Stele, uničena.« (Podbevšek, 1983: 399) Glede na to, da naj bi bil omet za poslikavo pripravljen že julija 1927, je bil v jeseni istega leta zaključni omet verjetno že suh in mokri omet ni mogel biti pravi izgovor za propad poslikave. Arhivski podatki o uporabljeni tehniki so skopi. V korespondenci med slikarjem in Mestnim gradbenim uradom je mogoče zaslediti podatek, da je slikar slikal v tehniki tempere.[7] Uporabljal naj bi namreč tempera barve, s katerimi je delal *a fresco*[8] tudi tako slaven slikar, kakor je bil Michelangelo (Podbevšek, 1941: 49), ki je bil eden izmed Jakopičevih najljubših slikarjev. Barve so se začele že prvo leto po izvedbi poslikave razkrajati in so bolj in bolj bledele.[9] Slikarja je razkroj umetnine zelo potrl, vendar odgovornosti za propad ni prevzel.[10]

Jakopičeva ideja obočne poslikave

Takšen umetniški izziv si je Jakopič želel že v svoji mladosti, vendar ga je dobil šele v poznih letih. Čeprav se je zavedal, da tako obsežno delo zahteva celega umetnika, je naročilo zaradi želje po širokem umetniškem udejstvovanju prevzel.[11] »Monumentalna figuralika je bila med obema vojnama slikarjeva osrednja produkcija, ki se je je intenzivno lotil zlasti, ko je umetnosti trg ponovno zaživel in so začela prihajati zahtevnejša naročila. /…/ Za Jakopičeva dela te vrste so značilne monumentalizirane več figuralne kompozicije, ki imajo ne glede na to, ali so nabožne vsebine ali ne, močno poudarjena socialna in moralna sporočila.« (Žerovc, 2012: 223–226) Pri tem se zdi, da se je Jakopič odzival predvsem na travmo prve svetovne vojne ter povojno gospodarsko in družbeno krizo, kar se je odražalo tudi v ideji obočne poslikave. Hkrati pa je navdih iskal tudi na gradbišču stavbe, ki se je še gradila. Prvo idejo poslikave s prizori prehoda iz stare dobe v novo[12] je opustil in se posvetil načrtovanju prizorov, »ki so jih prebivalci stanovanjske hiše sami fizično ali duševno doživeli: bitja brez strehe, v duši vroče koprnenje po domačiji, bitja v težkem delu in bitja v sreči« (Jakopič, 1929: 32).[13] Obseg naloge je slikarja prignal do tega, da je v preigravanju snovi in organizacije obočne poslikave združil skoraj vse, s čimer se je v zadnjem desetletju ukvarjal (Smrekar, 2015: 20).

Kompozicija prizorov se razvija postopoma tako, kot hodi gledalec skozi vežo. Začne se na desni strani pri vhodu s ceste s prizorom Brezdomci (Hrepenenje po domačiji), druga skupina nasproti prve na levi predstavlja s sejalcem Domačijo, sledi Selitev na desni, Gradnja na levi, desno Delo, levo Družina. Skupine so si formalno podobne, osrednje figure stojijo tik nad venčnim zidcem, približno 1–2 m za resnično ploskvijo oboka. Vse drugo je potisnjeno v ozadje (Podbevšek, 1941: 45). Kompozicija poslikave oboka je bolj figuralnega kot barvnega značaja,[14] ker je moral slikar upoštevati dejstvo, da je vseh šest prizorov povezanih med seboj. Pre-

1 Vladimirja Mušiča in Vladimirja Šubica.

2 Gradbeno vodstvo je na podlagi tega predloga prosilo slikarja za ponudbo. Jakopič se je povabilu odzval in je bil pripravljen izdelati sliko čez ves strop za 50.000 din. Gradbeno vodstvo pripominja, da bi popolnoma enostavna ureditev oboka s štukaturo stala 30.000 din (Podbevšek,1983: 384).

3 Slikar je za obočno poslikavo izdelal celo vrsto podrobnih študij. Večinoma gre za študije z ogljem ter v pastelu in barvni kredi, pa tudi v oljni tehniki.

4 Jakopič je na začetku septembra potoval v tujino in se sredi meseca vrnil domov, ne da bi začel izdelovati predloge. Po urgencah mestnega gradbenega urada naj bi Jakopič začel pripravljati kartone sredi septembra in jih do konca meseca prenesel na obok. Tudi to delo naj bi počasi napredovalo, gradbeni oder naj bi se večkrat odstranil in postavil na novo, kar je verjetno še podaljšalo izdelavo poslikave. Jakopiču je bilo tudi očitano, da je poslikavo na oboku delal le njegov sodelavec. Odgovor Mestnega gradbenega urada na odprto pismo gospoda Riharda Jakopiča (brez datacije). SI ZAL LJU 489, Mesto Ljubljana, splošna mestna registratura, fasc. 2036, fol. 590.

5 Vzrok so bila verjetno tudi vseskozi prisotna nesoglasja med naročnikom in izvajalcem zaradi izplačila predujma in izvedenega dela. Jakopič je konec decembra 1927 zaradi neizplačila predujma vladnemu komisarju na ljubljanskem mestnem magistratu napisal odprto pismo z naslovom Umetnik in njegova pravica, ki je bilo objavljeno 21. decembra 1927 v častnikih Jutro in Slovenec, kar je mestne oblasti spravilo v veliko zadrego. Jakopič je celo prosil slikarje Jamo, Sternena, Vesela in Tratnika za izjave o njegovem delu za poslikavo oboka, in vsi so se pozitivno izrekli o njem (Podbevšek, 1983: 391–396).

6 Iz Jakopičevega pisma Mestnemu gradbenemu uradu z dne 19. 11. 1928 (Podbevšek, 1983: 399).

7 Pismo Mestnega gradbenega urada Rihardu Jakopiču (brez datacije). SI ZAL LJU 489, Mesto Ljubljana, splošna mestna registratura, fasc. 2036, fol. 590.

8 Avtorjevo poznavanje tehnologije slikanja na sveži omet, ki se pojavlja v literaturi, je bilo očitno pomanjkljivo, saj uporaba tempera barv pri slikanju na sveži omet tehnološko ni smiselna.

9 Leta 1941, ko je stanje poslikave opisoval Podbevšek, je bil razkroj tolikšen, da je bila umetnina pravzaprav uničena, ohranila se je samo še v posameznih prizorih (Podbevšek, 1941: 49).

10 »Ni šlo po moji volji, ampak po volji drugih!« je pojasnjeval slikar. »Ti so vse bolje vedeli kakor jaz.« (Podbevšek, 1941: 50)

11 Pozneje je v korespondenci z Mestnim gradbenim uradom zapisal, da je to delo prevzel zato, da podari svojemu rojstnemu mestu obširen umotvor, dostopen vsakomur.

12 »Če bi bil Jakopič izvršil prvi koncept, bi bil ustvaril mogoče literarno umetniško delo, ki bi brez obsežnega komentarja že ob postanku ostalo tuje tistim, za katere bi bilo narejeno. Tako pa je ustvaril delo, ki izvira iz žive sodobnosti in posega v sredo njenih problemov. Zato delo mogoče ni tako tradicionalno in ponujoče lepo, kakor bi si marsikdo želel, a je zato neposredno živo kot zrcalo in kot faktor.« (Stele, 1929: 30) V tej ideji je umetnik predvidel tudi lastni portret, ki s pogledom obrnjen nazaj in z levo roko vabi ljudi iz dobe svoje mladosti, z desno jim kaže naprej, kjer prizori iz sodobnega delavskega, industrijskega in tehnično-kulturnega miljeja označujejo novo dobo (Podbevšek, 1941: 42).

13 Kakor sta ta hiša in ves življenjski milje, ki jo je povzročil in ki jo bo uporabljal, sodobno realna, tako realna, trpko jasna je vsebina izvršenega koncepta (Stele, 1929: 30).

14 Kar za Jakopiča ni značilno, saj je sicer izrazit kolorist.

dlogi sta zelo blizu poslikavi oboka, ker naj bi ju Jakopič končal, tik preden je začel poslikavo na oboku. Ogledujoč si po njegovem navodilu skupino za skupino, odkrivamo v njih splošne človeške prizore, na desni strani žalostne, na levi vesele, ki so se dogajali in se bodo, dokler bo živel človeški rod. Pri vseh je svet nekoliko dvignjen, da se tla bolj vidijo, in vsi predstavljajo ostre kontraste, ki sestavljajo vsako dramatično kompozicijo (Podbevšek, 1941: 50). »Da so vse skupine razsvetljene iz ene točke, je za moje umetniško čustvovanje in izražanje samo po sebi razumljivo, sicer bi bila motena enotnost kompozicije,« opisuje Jakopič (Jakopič, 1929: 32).

Brezdomci (Hrepenenje po domačiji)

S tem najbolj žalostnim prizorom slikar poustvarja obdobje po prvi svetovni vojni, ko je na stotine ljudi v paničnem strahu zapuščalo svoje domove. Brezdomec z družino se odpravlja v negotovo prihodnost v upanju, da bo tudi njihovega trpljenja nekoč konec. Prek ramen objema ženo z otrokom, sledi jim starejša hčerka, ki si zastira pogled v neznano. Za brezdomca je Jakopič pripravil vrsto študij z ogljem in tudi študijo z barvno kredo (Podbevšek, 1941: 51). Je morda v podobi brezdomca[15] uresničil svoj lastni portret, ki ga je predvidel v svoji prvi, sicer pozneje opuščeni ideji?

Domačija (Sejalec)

V nasprotju z brezdomci ima sejalčeva družina v naslednjem prizoru, upodobljenem na nasprotni strani oboka, dom in zemljo, ki jo obdeluje. Sejalec gospodar stopa po razoru in seje žito, v ozadju razora gospodarjeva žena in hči okopavata njivo. Sonce sije, vendar je na nebu precej oblačkov kot po navadi v marcu in aprilu, ko hkrati pripeka sonce in dežuje (Podbevšek, 1941: 51). Na barvni študijski upodobitvi je slikar z barvitostjo ustvaril živo spomladansko vzdušje setve, medtem ko je to na zdaj monokromnem prizoru na oboku izgubljeno. Kljub temu je kompozicija prizora dobro berljiva.

Selitev

Naslednji sredinski prizor na desni strani oboka je Selitev. Upodobitev begunske družine, ki jo sestavljajo mati, hčerka in verjetno materin oče, spominja zlasti na prizore iz prve svetovne vojne, ko se je moralo na tisoče slovenskih družin čez noč preseliti z vojnega območja na Primorskem v notranjost dežele. Večinoma se jim je od vsega premoženja posrečilo rešiti samo, kar so mogli odnesti s seboj. Tako je družina brez skrbnika, ki je morda že padel v kakšnem strelskem jarku, rešila le borno imetje (Podbevšek, 1941: 52).
Skladno z dogajanjem je nad družino upodobljen temen podolgovat oblak, skozi katerega preseva le malo svetlobe, časi pred upodobljenci so temni, težki.
Osrednja figura prizora – mati, ki nosi največje breme – je himna slovenski materi in materi na splošno. Tej skupini je slikar namenil pomembno vlogo, saj sonce nad oblaki osvetljuje vse druge prizore. Zaradi pomena te sončne svetlobe se je slikar pozneje začel posvečati barvnemu razpoloženju vseh drugih prizorov.

Gradnja

Prizor gradnje na nasprotni strani predstavlja tri delavce v trikotni kompoziciji, ki se trudijo postaviti zidarski oder. Dva v ozadju podpirata drog, da ga bo sodelavec v ospredju lahko postavil pokonci. Slikar je morda navdih za ta prizor našel prav na gradbišču stavbe, ki se je v času poslikave oboka še vedno gradila.

Delo

Vsebina prizora je zelo preprosta. Dva delavca s krampom razbijata skalovje, tretji z lopato meče kamenje na kup. Ta prizor je Jakopič izbral kot prispodobo težkega in napornega dela, ki ga mora opravljati vsak človek, če si hoče ustvariti srečno in zadovoljno življenje. Iz ohranjenih študij je mogoče razbrati, da se je slikar v veliki meri posvetil drži figur, s katero naj bi poudaril težaško delo.

Družina

Zadnji prizor na levi severni strani oboka predstavlja družino v veselem razpoloženju, osvetljeno s soncem. Starejši otrok se igraje s psičkom drži matere za krilo, mlajši je živahen v njenem naročju. Oče je v prizoru nekoliko odmaknjen od družine in zamišljen počiva po težkem delu, v skrbi za svojo družino. Jakopič naj bi tako ta prizor s kmečkega dvorišča kar najbolj približal pojmovanju družine (Podbevšek, 1941: 54).
Iluzionistična upodobitev neba na temenu oboka naj bi poustvarila vzdušje nad posameznimi prizori. »Nad Brezdomci je leteč oblak, nad Sejavcem pomladansko v male skupine nabrani oblaki, nad Selitvijo je težek temen oblak, ki breme glavne figure še bolj obtežuje, nad Zgradbo so tenki megleni oblaki – že soparno mestno ozračje, nad Delom je plavo nebo in samo majhni oblački, očitno vroč dan, pri Družini pa so se oblaki zbrali kot venček okrog matere in otroka.« (Jakopič, 1929: 33)
Poslikava, ki je bila dokončana novembra 1928, le leto pred umetnikovo 60-letnico, je imela tako v strokovni kot v širši javnosti velik odmev. Konservator France Stele je zapisal, da je Jakopič s svojim zadnjim dejanjem poslikave oboka v slovenski umetnosti ovrgel mnenje in prepričanje, da impresionist ni zmožen monumentalne produkcije. Navedel je umetnikovo izjavo: »Vse, kar sem do tega delal, so bile same študije, priprava, to delo pa naj bi bilo umetniško dejanje, to pomeni, da so doživetja iz življenja in nature dozorela v meni in sem jih tudi izrazil. V tem oziru je bilo to delo zame prava izpolnitev.« (Stele, 1929: 30) Naj bi pa bilo to delo tudi izpolnitev dolgih pričakovanj slovenske umetnosti. »Delo za Jakopiča ni bilo lahko, ker mu je manjkalo ›prakse‹,« piše v nadaljevanju Stele in dodaja, »da si občinstvo rado misli, da mora avtoriziran umetnik vse znati, in se mu smešno zdi, da bi se moral za dano konkretno nalogo dolgotrajno pripravljati in celo učiti. Zato so Ljubljančani z nezaupanjem opazovali dolge priprave za to delo, ki so trajale pol leta do prve poteze s čopičem na delu samem, in še bolj mogoče, ko je izdelava zavzela eno celo letno delovno sezono, saj se kaj takega poslika po mnenju javnosti v enem mesecu /…/ Jakopič je končno v tektonskem oziru izvršil iluzijo prostega pogleda pod nebo v dejanskem okviru venčnega zidca, sten veže in robov odprtin njene banje. Končno njegovo dejanje pa je bilo, da je uspel tudi v tem, da je slikarijo podredil ploskvi in zidu tako popolno, kakor so to znali samo iluzionisti baročne dobe /…/ Soglasna sodba poznavalcev je, da po baročnem iluzionizmu v svetu monumentalnega slikarstva slovenska umetnost še ni ustvarila večjega dela, kakor je to.« (Stele, 1929: 30–31)

Izhodišča konservatorsko-restavratorskega projekta

Načrtovanje konservatorsko-restavratorskega posega na Jakopičevi poslikavi se je začelo hkrati z načrtovanjem celostne obnove fasade Meksike leta 2007. Takrat so bile v sklopu konservatorsko-restavratorskega projekta izvedene prve sondažne in naravoslovne raziskave zunanjščine celotne stavbe, vključno s sondažnimi in naravoslovnimi raziskavami obočne poslikave. Pripravo konservatorsko-restavratorskega projekta je spremljala recenzentska komisija v sestavi mag. Ivan Bogovčič in dr. Robert Peskar ter konzultantka mag. Beti Žerovc, ki je razpravljala tudi o vprašanju ohranjanja Jakopičeve obočne poslikave. To je kompleksno in izjemno delo enega ključnih slovenskih umetnikov 20. stoletja in je hkrati redkost ne le v njegovem opusu, temveč tudi v okvirih slovenskega impresionizma. »Osamljen primer ni le tipsko, kot velika zidna poslikava, temveč tudi kot javno naročilo takšnega obsega. Del te vrste, kjer bi bil ›slovenski impresionizem‹ – grobo rečeno – dostopen vsem dobesedno ›s ceste‹, preprosto nimamo. Poslikava hkrati predstavlja redkost tudi v smislu celostne umetnine, saj se s sočasno arhitekturo zliva v kvalitetno celoto.« (Žerovc, 2007: 1) Zaradi slabega stanja poslikave ter možnosti popolne izgube v prihodnosti je razprava tekla predvsem v smeri njenega snetja z ustrezno hrambo in ustreznim nadomestilom na oboku, ki bi ohranjalo duha časa ter prebivalcem Meksike in mimoidočim nudilo vizualno ugodje (Žerovc, 2007: 1). Vsako estetsko dopolnjevanje izvirnika z izhodiščem v slikarjevih študijah bi preglasilo mojstrovo delo, zato je bil podan predlog, naj se poslikava izbranega prizora ali več prizorov sname ter naj se zagotovi hramba v eni izmed državnih galerij. Hkrati pa je bilo predlagano, naj se na lokaciji pripravi nov omet, ki naj bi zagotavljal dobro podlago za ponovitev poslikave na oboku na podlagi ohranjenih Jakopičevih študij. Tako izvedena poslikava oboka naj bi celovito dopolnjevala memorialnega duha stavbe Meksike (Bogovčič, 2007). Z dopolnjevanjem poslikave *in situ*, pri kateri bi poskušali vzpostaviti originalno stanje v celoti, bi zagotovo ostali brez Jakopičeve poslikave, saj bi bil glede na obstoječi material takšen poseg lahko le interpretacija (Žerovc, 2007: 2). Vendar pa je od razprave o usodi Jakopičeve poslikave do začetka obnove zunanjščine minilo šest let, obnova te pa je potem potekala še naslednjih šest let, tako da smo se k Jakopičevi poslikavi ponovno vrnili leta 2018. Pri snetju posameznih prizorov bi bila zaradi njihove velikosti vprašljiva njihovo hranjenje in predstavitev javnosti. Upoštevajoč dejstvo, da gre za redek impresionistični motiv enega izmed najbolj znanih slovenskih slikarjev 20. stoletja, ter na podlagi izhodišč mednarodne doktrine, ki pravi, da so stenske poslikave sestavni del spomenikov, ki jih je zato treba ohranjati *in situ*,[16] se je pristojna spomeniškovarstvena služba odločila za minimalen konservatorsko-restavratorski poseg *in situ*, s katerim bi se izognili posegom v avtentičnost tako materiala kot motiva.

Konservatorsko-restavratorski poseg v letu 2019

Zanimivo je, da kljub hitremu propadanju in kljub prizadevanjem za ohranitev poslikave v pisnih virih ni bilo mogoče zaslediti podatkov o morebitnih starejših restavratorskih posegih. Šele leta 2007 so bili odvzeti vzorci za potrebe naravoslovnih preiskav ter izvedeni poskusi čiščenja in utrjevanja poslikave[17] za potrebe izdelave konservatorsko-restavratorskega projekta prenove celotnega objekta. Barvno

15 Študija glave brezdomca morda razkriva avtoportret (Jakopič, 1929: 47).

16 Snemanje in prenos stenskih poslikav sta nevarna, drastična in nepovratna posega, ki resno vplivata na fizično sestavo, materialno strukturo in estetske značilnosti stenskih poslikav. Ta posega sta zato upravičena samo v skrajnih primernih, ko ni možen noben poseg *in situ (Načela za ohranjanje in konserviranje-restavriranje stenskih poslikav, ICOMOS, oktober 2003)*.

17 Na prizorih Družina in Gradnja je bilo mogoče zaslediti pet vidnih poskusov čiščenja in utrjevanja, ki jih je izvedel Restavratorski center ZVKDS.

stanje poslikave v letu 2019 je bilo glede na dejstvo, da naj bi barve **že po letu dni** od nastanka bledele, precej monokromno, ohranjeni so bili barvni toni od rjave, rumene do rdeče, medtem ko je modrina neba skoraj v celoti izginila.

Stanje poslikave pred konservatorsko-restavratorskim posegom leta 2019

Površina poslikave banjastega oboka[18] obsega 82,5 m^2, nosilec ometa so lesene deske s trstiko in grobim ometom.[19] Nad obokom je prazen prostor, vendar ni dostopen. Slikovni omet je grobo zariban in stabilen, vendar so vzdolž oboka prisotne tanke razpoke. Večja razpoka, kjer je odpadlo nekaj ometa, je nastala nad venčnim zidcem, kjer se začne krivina oboka. Abrazija površine zaradi prašnih delcev, ki jih je veter prinesel s ceste, je bila še posebej očitna pri prizorih Sejalec (slika 14), Gradnja, Družina in Begunci. Povezava s finim ometom je slabša. Površina poslikave je bila prekrita s številnimi nečistočami in nepravilnostmi: živalskimi zapredki, sajami in smogom s ceste. Kakšna je bila poslikava ob nastanku, ne vemo natanko, vsekakor pa lahko rečemo, da je modro nebo v večji meri propadlo in da so figure le še bleda senca prave impresionistične slike (sliki 15, 16). Prizori, ki gledajo na prometno cesto, so zaradi abradiranih predelov slabše vidni (Begunci in Sejalec), prizora, ki sta bližje notranjemu dvorišču, pa sta bolje ohranjena (Družina in Delo). Po pregledu fotodokumentacije iz let 2001 in 2007[20] ter slikarjevih študijskih risb je razvidno, da se je obsežen propad poslikave zgodil kmalu po njenem nastanku in ne v zadnjih letih (slika 17).

Naravoslovne raziskave

Z namenom analize materialne sestave nosilca in barvnih slojev je bilo ob začetku posega leta 2019 na Naravoslovnem oddelku ZVKDS preiskanih 9 vzorcev ometa z barvno plastjo: 4 s prizora Gradnja in 4 s prizora Delo ter tudi večji vzorec ometa z oznako MEK 6, odvzet leta 2007 s prizora Gradnja (Gutman Levstik, 2019). Vzorec ometa z oznako MEK 6 je pokazal na karbonatno sestavo agregata (preglednica 1, slika 18). Vezivo grobega ometa je apneno z dodatkom cementnega klinkerja. V finem ometu je bila prav tako ugotovljena prisotnost karbonatnega agregata in apnenega veziva, vrhnjo plast pa je skoraj povsem nadomestil kalcijev sulfat dihidrat (sadra).[21] Barvna plast je enoslojna, debeline 15–50 µm, brez preslikav (slika 19). Z analizo FTIR (infrardečo spektroskopijo s Fourierevo transformacijo) je bilo kot vezivo identificirano sušljivo olje. Veziva je malo, kar je razvidno iz vzorcev z oznakami MEK 31, 32 in 37. Za modro ozadje sta bila uporabljena pigmenta prusko modra in barijev sulfat. Kalcijev oksalat, produkt razgradnje kalcita, prisoten v vseh preiskanih vzorcih, je verjetno posledica degradacije organskih snovi v barvni plasti.
Arhivski podatki o tempera tehniki so bili ovrženi na podlagi rezultatov naravoslovnih raziskav, izvedenih pred konservatorsko-restavratorskim posegom, saj so dokazali, da je Jakopič slikal z oljnimi barvami na suh intonaco (Gutman Levstik, 2019). Vrste sušljivega olja z izbranimi metodami ne moremo identificirati. **Očitno je, da je slikarju manjkalo izkušenj s poslikavo na ometu.**

VZOREC	DEBELINA	SESTAVA	VEZIVO	RAZMERJE agregat : apno	DRUGO
MEK6 – fini omet	6 mm	– karbonatna zrna 0,5–0,8 mm – silikatna zrna	apno	2 : 1	– kalcijev sulfat – sadra vrh plasti 0,5–0,8 mm
MEK6 – grobi omet		karbonatna zrna 0,2–2 mm	– apno z grudicami – cementni klinker kot dodatek	prevladuje vezivo	razpokano in porozno, sadra v razpokah

Preglednica 1: Pregled sestave nosilnih ometov poslikave na izbranem vzorc.

18 Dolžina veže je 10,5 metra, širina 4,85 metra, višina banjastega oboka je 2,5 metra.
19 Nemec v poročilu ugotavlja, da je v vzorcu MEK7 trstika položena zelo na redko (Nemec et al. 2007). Prav tako smo lahko to opazili na mestu odpadlega ometa.
20 Arhiv dr. Blaža Šemeta.
21 Kalcijev sulfat dihidrat je najden z infrardečo spektroskopijo s Fourierevo transformacijo (FTIR) in Ramanovo spektroskopijo (RS) v vseh vzorcih, razen pri RS na vzorcu MEK 37.

VZOREC/ LOKACIJA	SLOJ	VIDNA BARVA	FTIR (različne ekstrakcije, skupno)	RAMAN
MEK 31	Gradnja/ozadje pri drogu v rokah osrednje figure			
	2. sloj – b. plast	modra	– sadra – kalcijev oksalat – sušljivo olje – prusko modra – karboksilati – kalcit	– prusko modra – barijev sulfat – sadra
	1. sloj – omet	/	/	/
MEK 32	Gradnja/desni komolec osrednje figure			
	2. sloj – b. plast	oker	– sadra – kalcit – kalcijev oksalat – sušljivo olje	– hematit – geothit – ogljikova črna – sadra
	1. sloj – omet	/	/	/
MEK 33	Gradnja/rob ovratnika, desni dvigovalec križa, spodnja plast, verjetno barva draperije ali inkarnat			
	3. sloj	rdeča	– sadra – kalcijev oksalat	– hematit – ogljikova črna – sadra
	2. sloj	črna	/	– ogljikova črna – sadra
	1. sloj	omet	/	/
MEK 34	Gradnja/desna figura/drog v rokah			
	2. sloj	črna	– sadra – kalcit – kalcijev oksalat – neidentificirana snov	– ogljikova črna – hematit – sadra
	1. sloj	omet	/	/
MEK 39	Delo/ozadje levo od delavca na sredini			
	2. sloj	modra, bela	površina surovca: – sadra – kalcijev oksalat – kalcit – dolomit	– prusko modra1 – glinenec – sadra – ogljikova črna – barijev sulfat
	1. sloj	omet		sadra

Preglednica 2: Pregled sestave barvnih slojev na izbranih vzorcih.

Poskusi

Delo na poslikavi se je pričelo s poskusi obstojnosti barvne plasti, s t. i. swab testi.[22] Barvna plast je bila uprašena, povezanost barve (pigmenta z vezivom) z ometom je bila slabša pri ogleno črni in siena rdeči barvi. Da bi zaščitili prizore in v največji meri ohranili uprašene pigmente,[23] je bilo treba najti primeren način utrjevanja. Poskus predutrditve s Fu-nori algami[24] v različnih koncentracijah je bil nezadovoljiv, saj ni utrdil pigmentov.[25] Prav tako ni bil zadovoljiv poskus utrjevanja barvne plasti z amonijevim oksalatom, saj je po odstranitvi celulozne obloge nastala na površini bela koprena.[26] Swab teste smo izvajali tudi za ugotavljanje učinkovitosti utrjevanja na vajenicah in poskusih *in situ*.[27] Izvedli smo tudi poskusno retušo.

Odstranjevanje nečistoč

Nebo in ozadje posameznih prizorov smo čistili z vodno paro in spužvo ter tako odstranili precej nevezanih nečistoč. S hrapave površine ometa vseh ni bilo mogoče odstraniti, vendar bi z nadaljnjim, temeljitejšim čiščenjem lahko odstranili tudi pigmente, tako da smo se zadovoljili z dosežen-im rezultatom. Pri prizorih s figurami smo bili še previdnejši. Nečistoče smo odstranjevali prek japonskega papirja s tapkanjem z mokrimi spužvami ter tako odstranili lahko odstranljive delce. Odstranjevanje soli s celuloznimi oblogami ni bilo ne smiselno ne izvedljivo. Dejstvo, da so vodotopne soli migrirale iz globljih plasti na površino, sicer ni nezanemarljivo, vendar pa procesa nastanka soli ne moremo ustaviti, odstranjevanje skozi barvno plast pa bi na slednji povzročilo nepopravljive spremembe. Poskusi z vodno oblogo so pokazali, da je površina poslikave hidrofobna in se zato vodna obloga na površini ne obdrži več kot 5 minut.[28]

Analize učinkovitosti utrjevanja barvne plasti in barvne spremembe ob uporabi različnih utrjevalcev

Analize smo izvajali skupaj z Zavodom za gradbeništvo Slovenije (ZAG). Meritve so bile izvedene pred utrjevanjem in po njem. Poskusno utrjevanje je bilo izvedeno na rumeni in rdeči barvi prizora Selitev (sliki 20 in 21). Uporabili smo amonijev kazeinat (A) ter akrilna utrjevalca, ki sta bolj primerna za zunanjščino (B, C).[29] Meritve uspešnosti utrjevanja[30] so pokazale minimalne razlike med utrjevalci. Največjo trdnost po utrjevanju, v primerjavi z neutrjenim območjem, ima polje A, ki je bilo utrjeno z 1,5-odstotnim amonijevim kazeinatom. Območjem, utrjenim s 4-odstotnim sredstvom za utrjevanje (angl. Medium for Consolidation, MFC)[31] in 4-odstotnim Primalom,[32] pa se trdnost ni bistveno spremenila oziroma so v meji minimalnega odstopanja (Škrlep, 2019). Opazili smo barvne razlike med neutrjenim in utrjenim območjem, večja odstopanja smo opazili pri amonijevem kazeinatu, zaradi katerega so barve potemnele, površina pa je dobila moker videz. Barvne spremembe[33] so bile pri akrilih manjše, saj skoraj ni bilo opaziti razlike. Razlika med rezultatoma akrilatov je bila zanemarljiva (Škrlep, 2019).

Utrjevanje barvne plasti

Izbira utrjevalca je zahtevala tehten premislek. Potreben je bil utrjevalec, ki je primeren za zunanje poslikave, s čim boljšimi starostnimi karakteristikami ter minimalnimi vizualnimi spremembami oz. čim manjšo spremembo lomnega količnika svetlobe po nanosu. Upoštevali smo rezultate predhodnih analiz. Amonijev kazeinat ni najprimernejši za poslikavo v uvozni veži, saj bi nase lahko vezal trdne delce s ceste, prav tako so poskusi pokazali, da barve po utrjevanju z njim potemnijo. Utrjevalec MFC, ki je sicer na tržišču manj časa kot Primal, ima po podatkih proizvajalca dobro penetracijo in paropropustnost ter se v praksi zelo dobro obnese. Z dodatnimi poskusi smo dokazali njegovo učinkovitost, saj v primerjavi s Primalom dobro utrjuje že v zelo nizkoodstotnih raztopinah.
Poslikavo smo utrdili z enim nanosom 4-odstotne raztopine MFC. Nanašanje je potekalo s čopičem čez japonski papir. Nanos utrjevalca je bil minimalen, zato ni bilo bojazni, da bi na površini nastal neprodušen film.

22 Testi z vatiranimi palčkami.
23 Težko še govorimo o barvni plasti, saj veziva ni več prav veliko.
24 Japonske morske alge, Kremer Pigmente GmbH & Co. KG.
25 Tudi po utrjevanju z 2-odstotno vodno raztopino Fu-nori alg so pigmenti ostajali na vatirani palčki.
26 Postopek s 5-odstotno raztopino amonijevega oksalata v celulozni oblogi.
27 Poskusi v sodelovanju z Zavodom za gradbeništvo.
28 Ali pa za to obstaja kak drug fizikalni vzrok.
29 A = 1,5-odstotni amonijev kazeinat, B = 4-odstotni Primal CM330, C = 4-odstotni MFC.
30 Učinkovitost utrjevanja je ocenjena z meritvami odbojne trdote. Meritve so izvedene s prenosnim merilnikom trdote Equotip 3 (Proceq), s sondo D, ki ima udarno energijo 11 Nmm.
31 Lascaux Medium for Consolidation (Lascaux Colors & Restauro, Switzerland; v nadaljevanju MFC) je vodna disperzija akrilnega kopolimera, razvita leta 2005, https://lascaux.ch/en/products/art-handling-and-restauro/synthetic-resins-and-dispersions.
32 Primal CM330, dobavljiv pri Imo, d. o. o., Šentjošt nad Horjulom.
33 Celotna barvna razlika (ΔE*), sprememba v svetlosti (ΔL*), sprememba v rdeče-zeleni osi (Δa*) ter sprememba v modro-rumeni osi (Δb*) so nastale pred utrjevanjem na območjih A, B in C rumenega in rdečega testnega polja ter 11 dni po njem. Meritve so bile izvedene s spektrofotometrom Konica Minolta, ki ima kot opazovanja 10 stopinj in D65 standardno svetlobo. Rezultat je podan kot povprečje petih meritev za vsako posamezno barvo in vsak posamezen utrjevalec.

Kitanje in utrjevanje ometa (*arriccia in intonaca*)

Sanirali smo vzdolžno razpoko nad venčnim zidcem, kjer je odpadlo tudi nekaj ometa (*arricia* in *intonaca*). Omet je bil utrjen z apnenim utrjevalcem Calosil,[34] zakitan s klasično apneno malto ter zariban v hrapavo površino, kar se da podobno originalu. Pri stiku kamnitega portala z obokom je nastala razpoka (reža), lokalno je odpadlo nekaj ometa. Tam smo namestili novo trstiko ter omet zakitali z grobo malto v več nivojih. Puščen je bil odprt stik, da materiala lahko delujeta neodvisno. Novozakitana mesta so bila nato retuširana.

Retuša – tonsko zapolnjevanje poškodb

Stanje poslikave pred minimalno retušo, ki je bila nujno potrebna za končno estetsko prezentacijo poslikave, je bilo za potrebe kasnejšega preučevanja poslikave natančno fotodokumentirano. Na posvetu s strokovno komisijo[35] smo določili, naj se pripravi poskusna retuša na primeru vrča (prizor Družina), in sicer na dva različna načina. Prvi način je bil s pigmenti v prahu in z vezivom MFC, drugi pa z nanašanjem mehkih zdrobljenih pastelov s čopičem. Prvi, klasični način retuširanja se je izkazal za primernejšega, saj je retuša bolj obstojna.
Zaradi pomanjkanja informacij o dejanskem videzu Jakopičeve poslikave[36] ob njenem nastanku smo izvedli retušo po principu minimalnosti, pri čemer smo z drobnimi pikicami s čopičem zapolnjevali le mesta, kjer barve ni bilo več, tako da se je ponekod vnovič vzpostavila anatomska zgradba figur, ki so bile pred posegom precej neberljive že s kratke razdalje. Retuša ni vidna s prostim očesom in je en ton svetlejša od originala. Rahlo smo zakrili tudi moteče svetlejše dele prizora Sejalec, pri katerem je slikar spreminjal velikost in pozicijo figure, čeprav so bili sprva videti kot abrazija površin. Šele po natančnem pregledu smo ugotovili, da gre za premik figure. Obseg retuše je minimalen in je omejen na območja, kjer je bila retuša nujno potrebna. Največ retuše je bilo potrebne na prizorih Sejalec, Begunci in Selitev, kjer je bil precejšnji del površine abradiran. Za vezivo smo uporabili 1-odstotno raztopino MFC.[37]

Z opisanim konservatorsko-restavratorskim posegom, pri katerem so bili uporabljeni najmanj invazivni postopki in materiali tako z vidika čiščenja in utrjevanja kot tudi z vidika retuše, smo v največji možni meri ohranili avtentičnost Jakopičeve poslikave. Posamezni figuralni prizori so po čiščenju in minimalni retuši postali za gledalca bolj razumljivi (sliki 22 in 23).

Vzroki za propadanje Jakopičeve poslikave

Po izvedbi naravoslovnih preiskav ter spoznavanju tehnike in Jakopičevega slikarskega izraza smo se pri konservatorsko-restavratorskem posegu odločili podrobneje raziskati vzroke za propadanje poslikave. Primerjava stratigrafij in analiza materialov, odvzetih s poslikave leta 2007 in leta 2019 (Gutman Levstik, 2019; Nemec et al., 2007), nas je ob pregledu strokovne literature pripeljala do možnih vzrokov za propadanje. V številnih vzorcih nismo opazili prisotnosti veziva, v nekaterih pa smo identificirali sušljivo olje. Vezivo smo opazili predvsem v vzorcih, odvzetih v letu 2007, medtem ko ga v vzorcih, odvzetih leta 2019, skorajda ni bilo opaziti. Vlaga iz ozračja ali iz nosilca namreč, ko jo zapremo pod film, lahko pospeši propadanje oljnega filma (Hudoklin, 1958). To nas napeljuje na misel, da je v tem obdobju razgradnja veziva kljub propadu v preteklosti še naprej napredovala. Strjevanje sušljivega olja po nanosu poteka v procesih polimerizacije, avtooksidacije in zamreženja, ki se nadaljujejo skozi leta, tudi ko je vezivo na otip že suho (Juita et al., 2012; Lazzari in Chiantore, 1999). Razgradnjo sušljivega olja lahko razumemo kot nadaljevanje avtooksidacije: makromolekule se krajšajo, nastajajo pa aldehidi in karboksilne kisline (Modugno et al., 2019; Lazzari in Chiantore, 1999). Na pospešeno razgradnjo vpliva povišana vlažnost ozračja, zaradi katere se v oljnem filmu poveča količina oksidativnih produktov (Juita et al., 2012). Ker je poslikava na zunanjščini, je neposredno izpostavljena nihanjem vlage v ozračju. K sreči pa ni neposredno izpostavljena padavinam, ki bi njen razkroj najverjetneje še pospešile. Polimerne verige sušljivih olj se še hitreje prekinejo v vlažnih razmerah ob stiku z alkalnimi (bazičnimi) materiali (Jones, 2004), med katere sodijo tudi ometi.
Alkalne površine povzročijo tudi slabše oprijemanje barvnih slojev, zato niso primerni nosilci za oljne barve (Jones, 2004). Znano je, da reakcije sušljivega olja z vlago, kisikom ali onesnaževalci okolja (npr. NO_2, SO_2, CO_2) lahko pospešijo razgradnjo barvnih slojev (Hermans, 2017). UV-obsevanje ter izpostavljenost dušikovemu oksidu (NO) in žveplovemu dioksidu (SO_2), pomembnima onesnaževalcema ozračja, ki sta na tako prometni cesti zagotovo prisotna v velikih količinah, sprva pospešujeta polimerizacijo in zamreženje, kasneje pa aktivirata cepljenje makromolekul maščobnih

34 Nanoapno, IBZ- Salzchemiem Gmbh & Co. KG.
35 Strokovna komisija: Tatjana Adamič, mag. Tjaša Pristov, ZVKDS, OE Ljubljana, ter mag. Anita Kavčič, mag. Martina Lesar Kikelj in Ajda Mladenović, ZVKDS, RC, dr. Andrej Smrekar, Narodna galerija, dr. Beti Žerovc, Filozofska fakulteta, Oddelek za umetnostno zgodovino.
36 Iz časa nastanka so ohranjene samo črno-bele fotografije, objavljene leta 1929 v reviji Dom in svet. Modro nebo je bilo bolje berljivo že po čiščenju, vendar bi več retuše na območju modrega neba pomenilo njegovo rekonstrukcijo, ki pa ob pomanjkanju podatkov ni bila smotrna.
37 MFC ima zelo dobro vezivnost že pri 1-odstotni raztopini na utrjeno poslikavo in je bil v primerjavi z drugimi akrilnimi mediji najboljša izbira, tudi z vidika kompatibilnosti in minimalnega vnosa različnih materialov.

kislin kot rezultat pospešene oksidacije. Vpliv onesnaževalcev je viden tudi na tej poslikavi, saj je tisti njen del, ki je bliže prometnici, slabše ohranjen kot del proti notranjemu dvorišču.[38] Sušljivo olje se razgrajuje, vse dokler ne nastane oksalna kislina, ki tvori oksalate s kovinskimi ioni iz pigmentov in polnil, zaradi česar poslikava lahko na površini dobi »kredast« videz (Pappas in Fischer, 1975).

V vseh analiziranih točkah poslikave smo opazili prisotnost kalcijevega oksalata. V nasprotju s klasičnimi oljnimi slikami, na katerih pogosto opazimo tudi prisotnost karboksilatov (mil) različnih kovin iz pigmentov (Modugno et al., 2019.; Noble, 2019), v FTIR spektrih z Jakopičeve poslikave nismo opazili prisotnosti kovinskih karboksilatov. Na razgradnjo barvnih slojev lahko vplivajo tudi pigmenti. Določene kovine v pigmentih lahko katalizirajo (pospešijo) sušenje in kasneje razgradnjo oljnega veziva (Modugno et al., 2019); mednje sodijo kobalt, mangan, železo, aluminij, barij, kalij in kalcij (Soucek et al., 2012). Prisotnost različnih pigmentov ima torej pomemben vpliv na ohranjenost oljnih barv (Bonaduce et al., 2012; Keune et al., 2008). Pigmenti lahko povzročajo razgradnjo barvnih slojev na več načinov: bodisi z bledenjem bodisi z vplivanjem na vezivo (Jones, 2004). Na Jakopičevi poslikavi smo največ poškodb opazili na modrih površinah, izdelanih s prusko modro, ter na rdečih in oker površinah, izdelanih z železooksidnimi pigmenti. Vsi našteti so pigmenti na osnovi železa. Poleg tega je v modrih slojih prisoten še barijev sulfat. Iz stratigrafij presekov poslikave je razvidno, da je od leta 2007 do leta 2019 barvna plast še naprej propadala (Gutman Levstik, 2019; Nemec et al., 2007). Barvni sloji so tanjši in videti je manj delcev. Na hiter propad in slabo ohranjenost barvnih slojev so lahko vplivale tudi razmere ob nastanku poslikave, saj vemo, da je bila takrat pozna jesen in se je olje sušilo v hladnih in vlažnih mesecih. V hladnem vremenu (pri temperaturi manj kot 10 °C) oljne barve postanejo bolj viskozne in se težje sušijo, kar podaljša čas strjevanja (www.thebalancesmb.com). Ko so oljne barve posušene, postanejo krhke (Jones, 2004), še posebej pri temperaturah pod zmrzaljo, čeprav olje zmrzuje pri nižjih temperaturah kot voda (www.thebalancesmb.com). Tudi nihanje temperatur barvnim slojem povzroča stres, še posebej v suhem ozračju (Jones, 2004), saj prihaja do krčenja in širjenja materialov, kar lahko vodi v mehanske poškodbe. Navedeno bi bilo mogoče povezati z dejstvom, da je Jakopič slikal pozno jeseni. Na podlagi zapisanega vidimo, da so možni številni vzroki za propad poslikave na oboku uvozne veže v Meksiki, najverjetneje pa je k razgradnji poslikave prispevala kombinacija različnih vzrokov.

38 Gl. poglavje Stanje poslikave pred konservatorsko-restavratorskim posegom 2019.

Povzetek

V obdobju med obema vojnama je bil likovni okras nepogrešljiv pri arhitekturnem ustvarjanju. Veliko vlogo je odigral v delih arhitekta Vladimirja Šubica, ki je med drugimi pomembnimi stavbami načrtoval tudi večstanovanjsko hišo Meksika ob današnji Njegoševi cesti. Slikarski okras na Meksiki je omejen na poslikavo oboka uvozne veže slikarja Riharda Jakopiča, ki je bila za slikarja svojevrsten izziv, saj je bil primarni nosilec njegovega ustvarjanja slikarsko platno. Jakopič je avgusta 1927 izdelal več kot sto študijskih risb, slik in kartonov. Delo na oboku je začel septembra 1927, oktobra so bili načrti končani v celoti in v posameznih šestih skupinah. Jakopič je naročilo dobil še pred koncem gradnje hiše, ki ga je navdihovala. Dejstvo, da je poslikava začela propadati že kmalu po nastanku, ne preseneča, saj Jakopič očitno ni obvladal tehnike slikanja na omet in je pri tem za vezivo uporabil sušljivo olje, kar je kmalu po nastanku povzročilo propad poslikave.

Poslikava obsega 82,5 kvadratnega metra in je bila izvedena na ometu na trstiko na lesenem banjastem oboku. Omet je kljub manjšim razpokam ob vznožju oboka stabilen. Čeprav je Jakopičeva poslikava vzbudila v času nastanka veliko zanimanje tako pri strokovni kot pri laični javnosti, prav tako pa ga je tudi njen zgodnji propad, restavratorskih posegov v preteklosti na poslikavi ni bilo. Leta 2007 so bile izvedene prve sondažne raziskave za potrebe izdelave konservatorsko-restavratorskega projekta za celostno obnovo zunanjščine Meksike, ki je vključevala tudi konservatorsko-restavratorski poseg na Jakopičevi obočni poslikavi. Po obnovi ulične in dvoriščne fasade v obdobju od leta 2013 do leta 2019 se je septembra 2019 začel konservatorsko-restavratorski poseg na Jakopičevi poslikavi. Da imamo opravka z neklasično stensko poslikavo, smo vedeli že od samega začetka načrtovanja posega. Vzporedno narejene naravoslovne raziskave barvne plasti in ometa v Restavratorskemu centru Zavoda za varstvo kulturne dediščine Slovenije so prisotnost sušljivega olja kot veziva le še potrdile. Na razgradnjo barvnih slojev so lahko vplivali tudi sami pigmenti, predvsem prusko modra in železooksidni pigmenti, ki vsebujejo železo, to pa pospešuje razgradnjo oljnega veziva, še posebej v kombinaciji z barijevim sulfatom, ki je bil tudi identificiran v modrih slojih.

V izziv nam je bila tudi uprašena barvna plast, prekrita s površinskimi nečistočami, zato so bile z Zavodom za gradbeništvo Slovenije izvedene analize učinkovitosti utrjevanja barvnih plasti in barvnih sprememb z različnimi utrjevalci na poskusnih aplikacijah. Uporaba »tradicionalnih« utrjevalcev namreč ni bila primerna, saj ni šlo za apneno tehniko. Izbrali smo Medium for consolidation (MFC) proizvajalca Lascaux, ki se je s poskusi izkazal za najbolj kakovostnega. Konserviranje-restavriranje poslikave je bilo omejeno na uporabo le najnujnejših mehanskih postopkov, kot sta čiščenje z vodno paro ter utrjevanje z uporabo minimalnega sredstva. Po kitanju poškodb ometa je sledila minimalna retuša s pigmenti v vezivu. Barvna plast je bila namreč ohranjena v manjši meri in zato kakršen koli večji poseg ni bil smotrn, saj je bil cilj posega ohranjanje avtentičnosti Jakopičeve poslikave v največji možni meri. Prav tako je bila retuša izvedena samo lokalno, pri čemer je bil uporabljen isti material kot pri utrjevanju.

Jakopičeva monumentalna impresionistična poslikava je v slovenskem prostoru edini tovrsten primer, zato sklicevanja na podobne primere in rešitve ni bilo. Ocenjujemo, da je obravnavani poseg pomenil kakovosten in sodoben pristop ter da je sledil najvišjim konservatorskim standardom. Z ohranitvijo avtentične Jakopičeve poslikave v največji možni meri smo ohranili tudi spomin na slikarjevo sicer grenko izkušnjo slikanja na omet, tehnike, ki je ni bil dovolj vešč. Pregled literature o možnih vzrokih propadanja in izvedenih naravoslovnih raziskavah pokaže, da je propadanje lahko posledica vremenskih vplivov in onesnaženja kot tudi izbire nepravilnega medija ter neprimernega časa poslikave.

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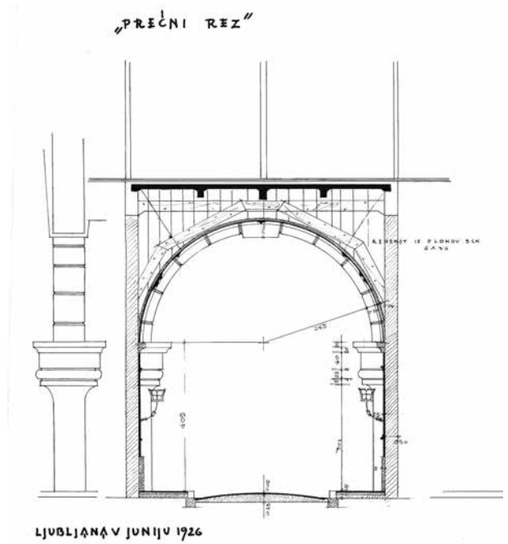
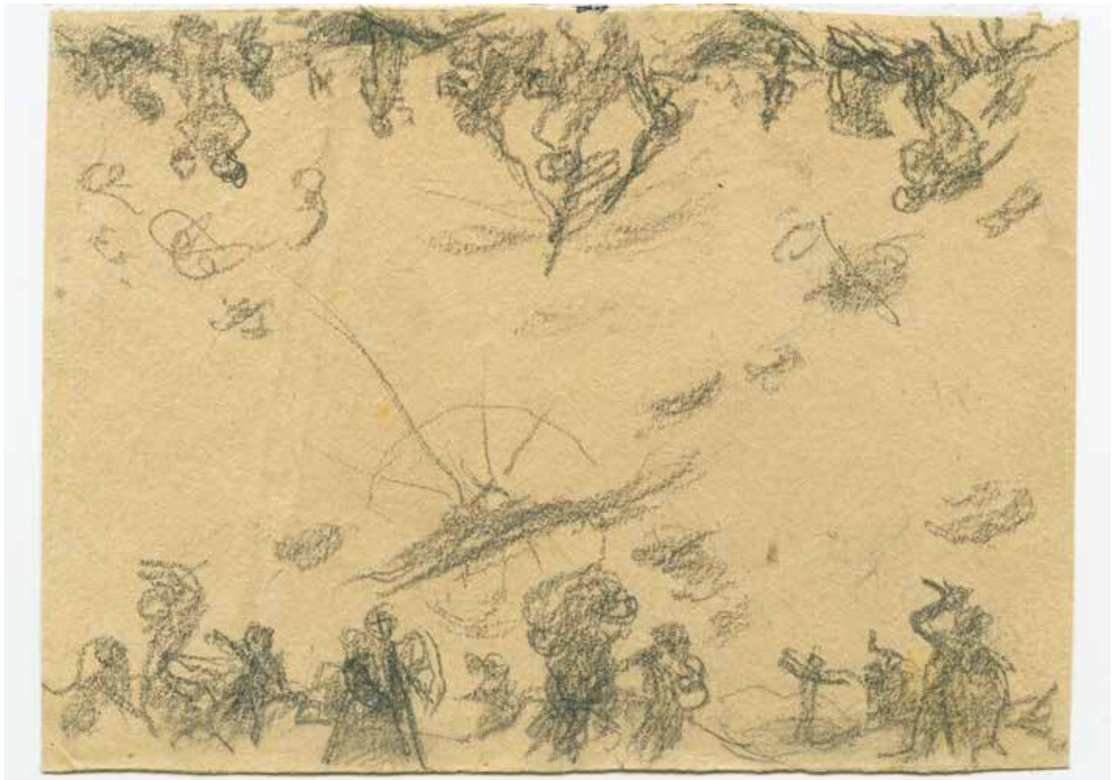
1. Meksika pred drugo svetovno vojno. Iz arhitekturne zbirke MAO (foto: Hugon Hibšer)
1. The Meksika building before the Second World War. From the MAO architectural collection (photo: Hugon Hibšer)



2. Prerez banjastega oboka uvozne veže v Meksiki. SI ZAL LJU 334, Zbirka načrtov, t.e. 015-003, a.e. 13
2. Cross section of the barrel-vaulted entrance passage of the Meksika building. SI ZAL LJU 334, Plans Collection, t.e. 015-003, a.e. 13

3. Predloga za poslikavo desne strani oboka s prizori Delo v kamnolomu, Selitev in Begunci, Narodna galerija, Ljubljana
3. Preliminary design for the painting on the right-hand side of the ceiling vault comprising the Work in the Quarry (Labour), Migration and Refugees scenes, National Gallery of Slovenia, Ljubljana

4. Predloga za poslikavo leve strani oboka s prizori Sejalec, Gradnja in Družina, Narodna galerija, Ljubljana
4. Preliminary design for the painting on the left-hand side of the ceiling vault comprising the scenes The Sower, Construction and The Family, National Gallery of Slovenia, Ljubljana

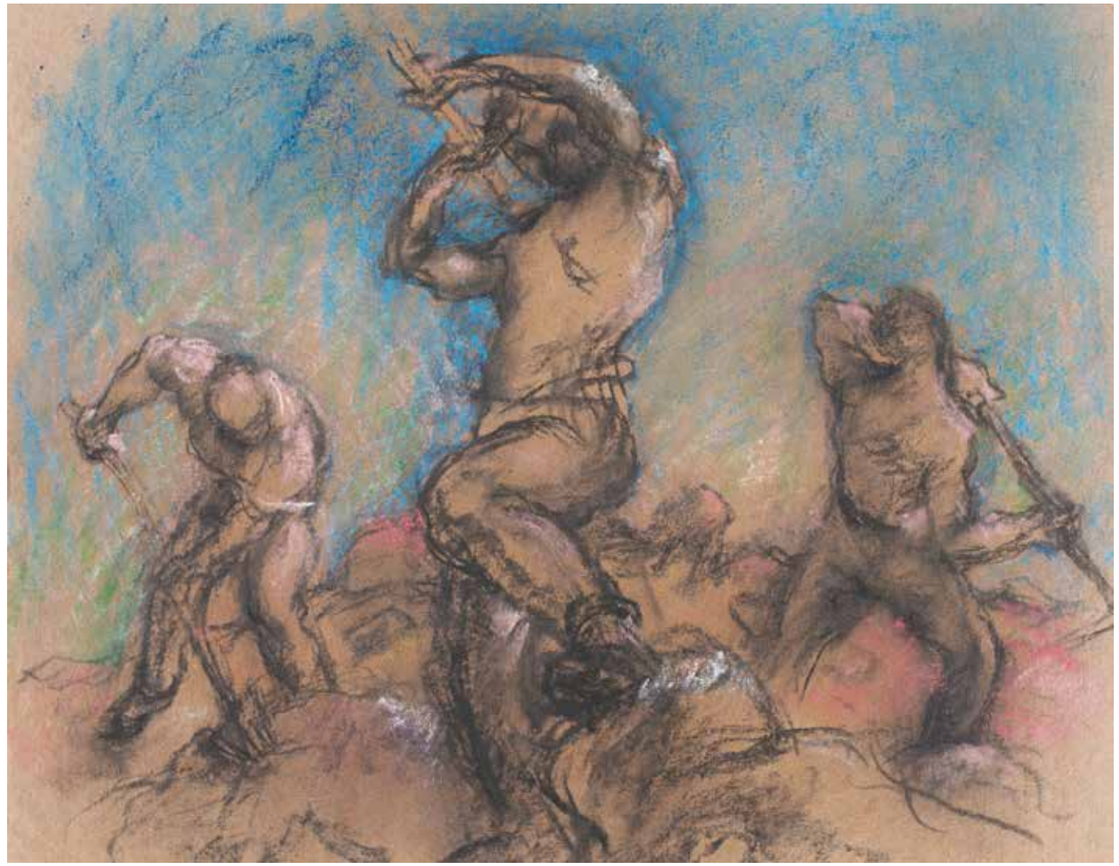


5. Študija s svinčnikom na papirju celotne kompozicije oboka z osvetlitvijo prizorov iz ene točke, okrog 1927. Narodna galerija, Ljubljana
5. Pencil study on paper of the overall composition of the ceiling vault with illumination of the scenes from a single point, circa 1927. National Gallery of Slovenia, Ljubljana

6. Barvna študija za prizor Brezdomcev v pastelu, okrog 1926. Narodna galerija, Ljubljana
6. Colour study in pastel for the Homeless scene, circa 1926. National Gallery of Slovenia, Ljubljana

7. Barvna študija Sejalca v oljni tehniki, po letu 1927. Narodna galerija, Ljubljana
7. Colour study in oil for the Sower scene, after 1927. National Gallery of Slovenia, Ljubljana

8. Barva študija prizora Gradnje v pastelu na papirju, 1927. Narodna galerija, Ljubljana
8. Colour study in pastel on paper for the Construction scene, 1927. National Gallery of Slovenia, Ljubljana



9. Barvna študija prizora Delo v kamnolomu v pastelu na papirju, 1927. Narodna galerija, Ljubljana
9. Colour study in pastel on paper for the Work in the Quarry (Labour) scene, 1927. National Gallery of Slovenia, Ljubljana

10. Študija delavca v kamnolomu v črni kredi na papirju, 1927. Narodna galerija, Ljubljana
10. Study of a quarry labourer in black chalk on paper, 1927. National Gallery, Ljubljana

11. Barvna študija prizora Družine v pastelu na kartonu, Narodna galerija, Ljubljana
11. Colour study in pastel on card for the Family scene, National Gallery of Slovenia, Ljubljana

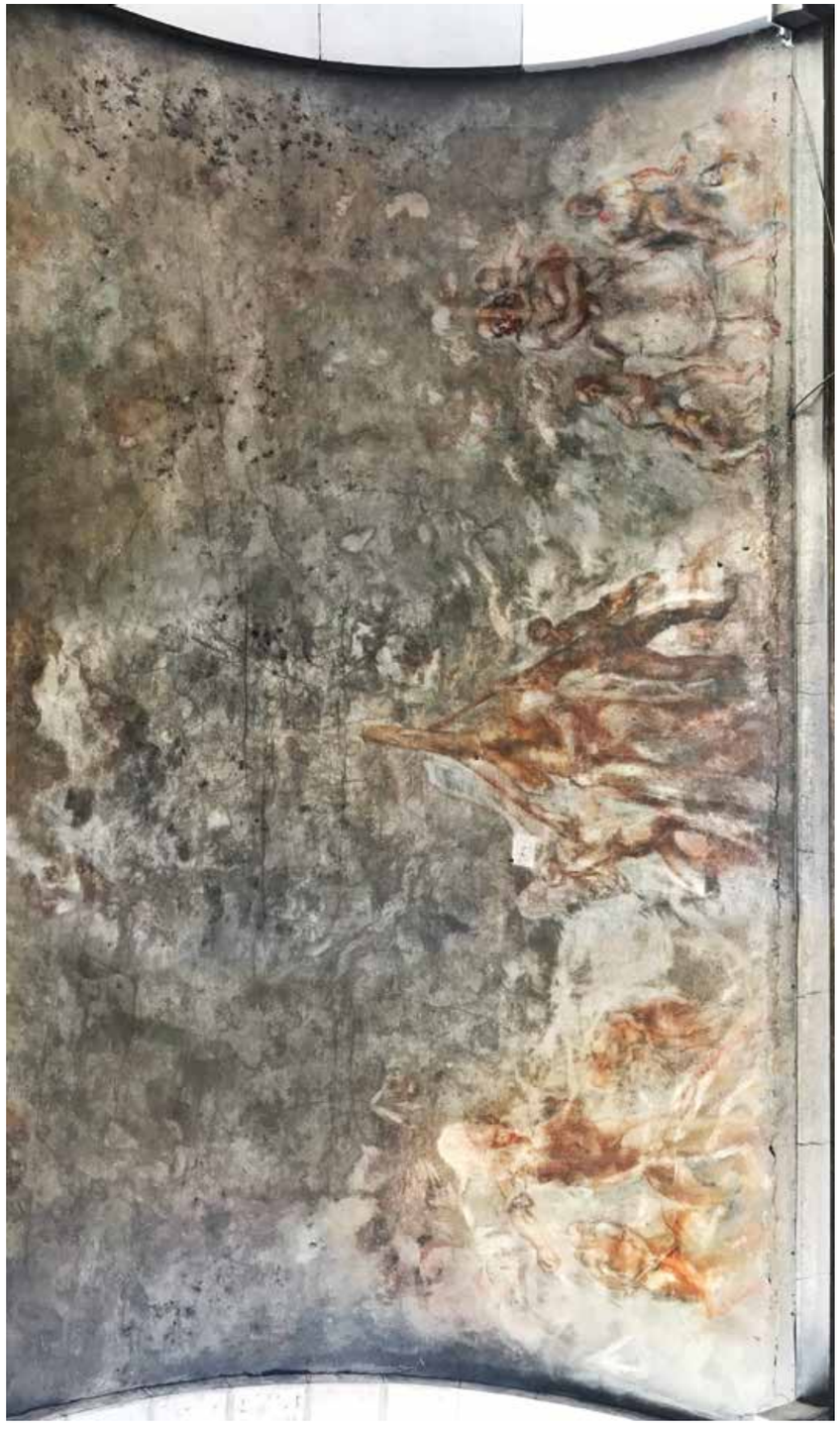
12. Fotografija prizora Selitve iz leta 1929 z vidnimi oblaki nad samim prizorom (Jakopič, 1929). Iz gradiva NUK
12. Photograph of the Migration scene from 1929 with clouds visible above the scene (Jakopič, 1929). From material held by NUK

13. Fotografija prizora Družine iz leta 1929 z vidnimi oblaki nad samim prizorom (Jakopič, 1929). Iz gradiva NUK
13. Photograph of the Family scene from 1929 with clouds visible above the scene (Jakopič, 1929). From material held by NUK

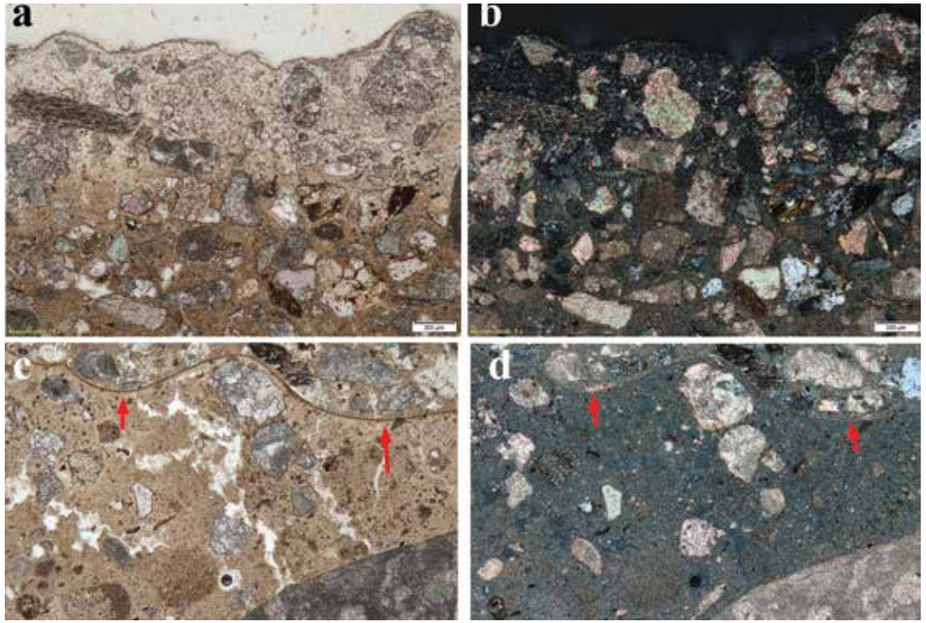
14. Abrazije ometa so razkrile tudi popravke v kompoziciji poslikave, prizor Sejalca (foto: Saša Snoj).
14. Abrasions of the plaster also revealed corrections in the composition of the painting, Sower scene (photo: Saša Snoj).

15. Kopač v kamnolomu spominja na risbo z barvno kredo, detajl s prizora Delo (foto: Saša Snoj).
15. This quarry labourer is reminiscent of the colour chalk drawing, detail from the Labour scene (photo: Saša Snoj).

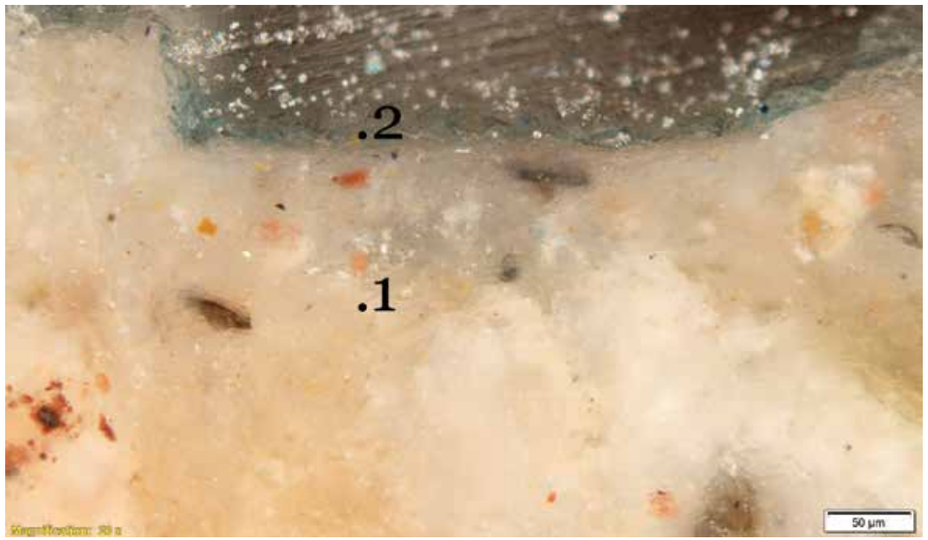
16. Deček s psičkom, prizor, na katerem so lokalno še ohranjeni pastozni nanosi barve, predvsem na predelu obraza (detajl s prizora Družina med konservatorsko-restavratorskim posegom) (foto: Saša Snoj)
16. Boy with puppy, a scene in which local areas of pastose colour application still survive, above all in the area of the face (detail from the Family scene during the conservation-restoration intervention) (photo: Saša Snoj)



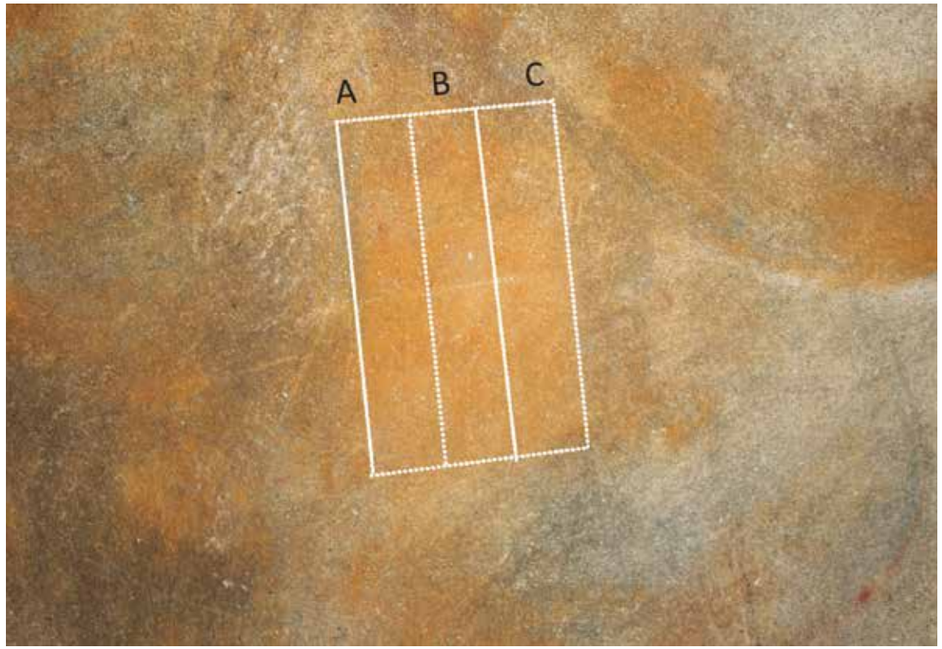
17. Panoramska fotografija leve strani poslikanega oboka pred konservatorsko-restavratorskim posegom, januarja 2019 (fotokolaž: Saša Snoj)
17. Panoramic photo of the left-hand side of the painted ceiling before the conservation-restoration intervention, January 2019 (photomontage: Saša Snoj



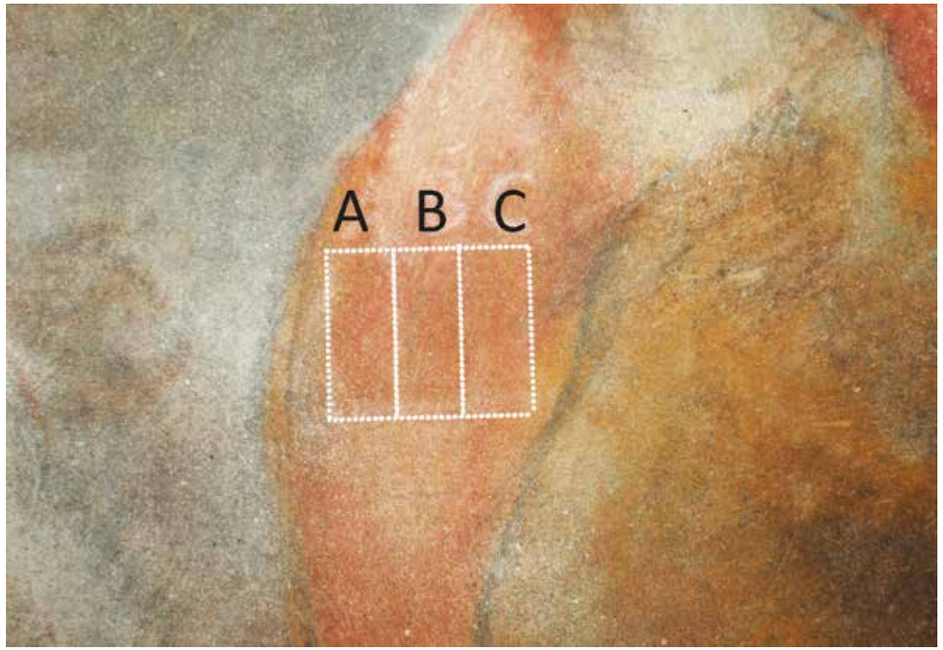
18. Fotografija vzorca, predstavljenega v preglednici 1. Sliki a in b prikazujeta zgornji, fin omet, sliki c in d pa spodnji, grob omet (50-kratna povečava). Z rdečimi puščicami je prikazana meja med obema ometoma. Sliki a in c pri vzporednih nikolih, sliki b in d pa pri prekrižanih nikolih (foto: Maja Gutman Levstik).
18. Photograph of the sample presented in Table 1. Image a and b show the upper, fine plaster, while images c and d show the lower, coarse plaster (50x enlargement). The red arrows show the boundary between the two types of plaster. Images a and c are under parallel nicols, images b and d are under crossed nicols (photo: Maja Gutman Levstik).



19. Prečni presek vzorca MEK 31 v vidni svetlobi (20-kratna povečava; foto: Maja Gutman Levstik). Na površini ometa opazimo ostanke modre poslikave (sloj 2).
19. Cross section of sample MEK 31 in visible light (20x enlargement; photo: Maja Gutman Levstik). The remains of blue painting may be observed on the surface of the plaster (stratum 2).



20. Testno polje na rumeni barvi za določevanje barvnih razlik (foto: Saša Snoj)
20. Test field on area of yellow paint to determine colour differences (photo: Saša Snoj)



21. Testno polje na rdeči barvi za določevanje barvnih razlik (foto: Saša Snoj)
21. Test field on area of red paint to determine colour differences (photo: Saša Snoj)

"Delo"

"Selitev"

"Brezdomci"

22. Primerjava posameznih prizorov poslikave pred retušo in po njej (foto: Saša Snoj)
22. Comparison of individual scenes before and after retouching (photo: Saša Snoj)

"Sejalec"

"Gradnja"

"Družina"

23. Primerjava posameznih prizorov poslikave pred retušo in po njej (foto: Saša Snoj)
23. Comparison of individual scenes before and after retouching (photo: Saša Snoj)

Tatjana Adamič, Katja Kavkler, Saša Snoj

Conservation-restoration of the painting by Rihard Jakopič on the vaulted ceiling of the entrance passage of the Meksika building

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Abstract

The painting by Rihard Jakopič on the vaulted ceiling of the entrance passage leading into the Meksika building, a residential block in Ljubljana built in 1927 for municipal employees, is the only Impressionist work of its kind in Slovenia that is directly accessible to the public. It combines with Vladimir Šubic's architectural design and the two statues by Lojze Dolinar flanking the entrance to create a harmonious whole. Before beginning the ceiling painting, which features scenes relating to labour and social issues, Jakopič prepared several preliminary designs using a range of different techniques, and studied the impression created by the six scenes, which he conceived as a response to social conditions in the interwar period. The first investigative probes were carried out in 2007 as part of the preparation of a conservation-restoration project for the comprehensive renovation of the building's exterior. The first conservation-restoration intervention did not take place until 2019, despite the fact that deterioration of the painting had begun to be visible shortly after it was completed and had also been the subject of public discussion. For the purposes of this intervention, new, more detailed scientific investigations were conducted of the paint layer and plaster layers, which suggested several more possible causes of the painting's deterioration alongside those that were already known. This was followed by attempts at consolidation and measurements of the success of consolidation. Examination of the results of the research, analyses and experiments carried out on test samples and *in situ* dictated the choice of materials for the intervention, where we adhered closely to the minimalist principle, both in the application of consolidants and in the implementation of the final presentation, in other words retouching. As a result, the authenticity of Jakopič's painting was preserved to the greatest possible extent.

Introduction

The growth in Ljubljana's population after the First World War led to an increase in the construction of housing that was to a large degree influenced by "Red Vienna", where housing shortages and other social issues were addressed using a housing complex model, the aim of which was to improve the living conditions of workers and, in general, to democratise their lives in various areas. The construction of large housing complexes in this period in Ljubljana saw the involvement of the leading architects of the day, among them Vladimir Šubic, the official architect of the Pensions Institute, who designed what for that period was a high-quality residential building of a kind not previously seen in Slovenia. Alongside improvements in the standard of housing, great attention was paid to the general cultural life of working people, which was expressed through, among other things, the incorporation of the visual arts in the planned construction. The collaboration of three prominent Slovene cultural figures – the architect Vladimir Šubic, the sculptor Lojze Dolinar and the painter Rihard Jakopič – meant that the construction of the Meksika residential complex for municipal employees of the City of Ljubljana resulted in an integrated work of art. The ceiling painting attracted considerable attention from art historians at the time of its creation because of its monumental scale and artistic expression, although as a result of deterioration of the painting *in situ*, greater attention was reserved for the surviving preliminary designs. Given that the substance of the painting had deteriorated significantly – and no conservation-restoration interventions were carried out on the painting before 2019 – it represented a major challenge for conservation-restoration experts. The aim of the intervention was to preserve Jakopič's painting to the greatest possible extent. As a result of the poor state of conservation of the original colour design, which was now almost illegible, any attempt at reconstructing the colours would represent significant interference with Jakopič's work. Scientific investigations of the materials used provided important information about their composition and sensitivity to a range of factors, while the optimal effects on the original substance were identified through a series of consolidation tests. Thanks to the use of largely reversible materials and minimal retouching, the preservation of Jakopič's painting in its authentic form was achieved to the maximum possible degree, and in this way due respect was shown towards the artist's work.

Historical context of the creation of the painting

It was not until the second half of the 1930s that the City of Ljubljana began addressing the growing problem of the city's housing shortage in a planned or active way. One exception was the construction of large housing complexes on the outskirts of the city centre. The Municipal Works Department built two large residential blocks, known respectively as Meksika and the Red House (*Rdeča hiša*), almost simultaneously. These complexes were in fact replicas of the *Hof* (court) type of municipal housing complexes in Vienna. The City of Ljubljana asked its architects[1] to "take as a model the large housing complexes built in Vienna as part of the major post-war construction project" (Zlodre et al., 1992: 12). In the catastrophic conditions prevailing after the end of the First World War, the question of housing that would also improve the living conditions of workers and democratise their lives was one of the biggest challenges facing the authorities, who needed to formulate a housing policy with an emphasis on areas such as the social role of women, working class culture, the education of children, art, high-quality leisure and prevention by ensuring good standards of hygiene.

The aim of the social housing programme was thus to create better living conditions and a better healthcare and education system for the working class. Taken together, these factors also prompted a new approach to the design of residential architecture. When designing the Meksika complex, the architect Vladimir Šubic took as his model the Fuchsenfeldhof complex in Vienna's Meidling district, built between 1922 and 1925 to plans by the architects Heinrich Schmid and Herman Aichinger. In addition to more than 400 flats in a complex consisting of multiple wings built around a series of internal courtyards, Fuchsenfeldhof included a central laundry, a communal bathhouse, a kindergarten and a library. The more modest Meksika building in Ljubljana included more than 80 flats with all modern hygienic conveniences, complemented by a communal bathhouse and laundry. To provide access from the street to the internal courtyard, the architect planned a large vaulted passage with artistic decoration. The commission to design statues of a man and a woman (or a mother and a father) to stand either side of the entrance to this passage was entrusted to the sculptor Lojze Dolinar, while the City of Ljubljana invited the artist Rihard Jakopič to provide the painting for the passage's vaulted ceiling. Writing in the periodical *Dom in svet* in 1929, Jakopič explains how he was offered the commission: "I don't know exactly how the gentlemen at the Town Hall came to think of me for this commission. I'm sure I'm not wrong in thinking that the source of this idea was the architect Mr V. Šubic . . . I also have the impression that another gentleman put in a word for me, and that his view eventually prevailed" (Jakopič, 1929: 31). This other gentleman was presumably the eminent architect and professor Jože Plečnik, who proposed to the Municipal Works Department that the commission should go to the academy-trained painter Rihard Jakopič.[2] Since Jakopič was a guarantee of the highest artistic quality, the Municipal Works Department proposed to the

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1 Vladimir Mušič and Vladimir Šubic.
2 On the basis of this recommendation, the works department asked the artist to submit a tender. Jakopič responded to the invitation and stated himself willing to produce a painting covering the entire ceiling for 50,000 dinars. The works department observed that even a perfectly straightforward plastering of the ceiling would cost 30,000 dinars (Podbevšek, 1983: 384).

government commissioner that the commission should be awarded to him (Podbevšek, 1983: 384).
The commission to paint the vaulted ceiling was a unique challenge for Jakopič, whose primary medium was the canvas. Jakopič was awarded the commission on 21 May 1927 while the building was still under construction. The plastering of the vaulted ceiling was supposed to be completed by the end of July of that year. The execution of the painting was beset by delays and Jakopič did not start work on the ceiling until mid-September. The preliminary designs were completed by the end of October, both of the work as a whole and in six individual sets.[3] By this point, three compositions had been transferred to the ceiling and were already partly painted. In transferring his drafts to the ceiling, Jakopič was assisted by the painter France Pavlovec (Mikuž, 1958: 868). By the start of December 1927, the composition had been fully transferred to the ceiling (drawn and painted), which meant that two thirds of the work were complete.[4] Owing to the unfavourable weather conditions, Jakopič was then forced to interrupt the painting of the ceiling. His request to be allowed to wait until spring to resume the work was turned down on the grounds that the ceiling of the entrance passage had to be painted before the tenants moved into the building.[5] In the end, the painting was not completed until the second half of November 1928.[6] "As it happened, the still damp plaster on the ceiling – on which, under pressure from the Town Hall, Jakopič was required to work – began almost immediately to disintegrate the paint, causing a progressive fading of the colours. The disintegration had reached such a scale by the last years of Jakopič's life that, in the words of art historian France Stele, "the long-cherished hopes of Slovene art were dashed" (Podbevšek, 1983: 399). Given that the plaster base of the painting was supposed to have been ready in July 1927, the final plaster was probably already dry by the autumn of that year, and damp plaster could not have been the real reason for the deterioration of the painting. The archives contain little information on the technique used. Correspondence between the artist and the Municipal Works Department indicates that Jakopič supposedly used the tempera technique for the project.[7] It appears that he used tempera paints, as used when painting *a fresco*[8] by none other than Michelangelo, one of Jakopič's favourite artists (Podbevšek, 1941: 49). The paints began to disintegrate in the first year after the painting was completed, and the colours increasingly faded.[9] The artist was greatly saddened by the disintegration of the work, but did not accept responsibility for its deterioration.[10]

Jakopič's idea for the ceiling painting

Jakopič had desired an artistic challenge of this kind as a young man, but was not destined to get it until late in his life. Although he was aware that such an extensive work required an artist at the height of his physical and mental powers, he accepted the commission out of a desire for broad artistic engagement.[11] "In the interwar period, monumental works of figurative art represented the core of the artist's production, which he began to undertake intensively, particularly when the art market started to revive and more demanding commissions began to arrive.
Typical of Jakopič's works in this genre are monumental multi-figure compositions that, whether or not they have religious content, contain strong social and moral messages" (Žerovc, 2012: 223–226). Above all, these works seem to be Jakopič's response to the trauma of the First World War and the post-war economic and social crisis. This is also reflected in the idea of the ceiling painting. At the same time, he sought inspiration on the site of the building that was still under construction. Abandoning his original idea of a painting with scenes showing the transition from the old era to the new,[12] he began planning scenes "which the inhabitants of the residential complex had physically or mentally experienced themselves: homeless creatures yearning in their souls for a home, creatures engaged in heavy labour, creatures in moments of happiness" (Jakopič, 1929: 32).[13] The scale of the task drove the artist to combine, in his approach to the subject matter and his organisation of the ceiling painting, almost everything he had been working on over the last decade (Smrekar, 2015: 20).
The composition of the scenes develops gradually as the viewer walks through the passage. It begins on the right-hand side at the entrance from the street with the scene of the Homeless (aka Yearning for a Home). The second group – opposite the first on the left-hand side – represents the Homestead, with a central figure sowing seeds. Then come Migration on the right, Construction on the left, Labour on the right and Family on the left. The groups are all similar in terms of form, with the central figures in each group standing immediately above the cornice, approximately 1–2 metres behind the true plane of the vault. Everything else is pushed into the background (Podbevšek, 1941: 45). The composition of the ceiling painting is more figural than colourist,[14] because the artist had to take into account the fact that all six scenes are interconnected. The preliminary designs are very close to the final painting, since it seems that Jakopič did not finish them until just before he began painting the ceiling. Viewing the work group by group as per his instruction, we discover in them general human scenes, mournful on the right-hand side, happy on the left, which have taken place and will continue to take place for as long as there are human beings. In all of them the landscape is slightly raised, so that the ground is more visible, and all of them present the sharp contrasts that compose every dramatic composition (Podbevšek, 1941: 50). As Jakopič himself explained: "The fact that all the groups are illuminated from a single point is something self-evident for my artistic sensibility and expression, since otherwise the unity of the composition would be disrupted" (Jakopič, 1929: 32).

The Homeless (Yearning for a Home)

With this most mournful of all the scenes, the artist recreates the period following the First World War when hundreds of people abandoned their homes in panic. A homeless man sets off with his family into an uncertain future in the hope that there will one day be an end to their suffering. One arm is round his wife's shoulders. In her arms she clutches a child, while an older daughter follows them, shielding her gaze from the unknown. Jakopič prepared a series of charcoal studies for the homeless man, and also a study in coloured chalk (Podbevšek, 1941: 51). Could it be that the image of the homeless man[15] is actually Jakopič's self-portrait, as envisaged in his original but later abandoned idea?

The Homestead (The Sower)

In contrast to the homeless family, the sower's family in the next scene, on the opposite side of the arch, have a home and also some land to till. The sower walks down the furrow sowing seeds. Behind him, his wife and daughter turn the soil. The sun is shining, but there are several little clouds in the sky, as is usual in March and April, when it can be simultaneously sunny and rainy (Podbevšek, 1941: 51). In a colour study for this scene, the artist used colours to create the vibrant springtime atmosphere of the sowing season. This aspect has been lost in the now monochrome scene on the vaulted ceiling. Nevertheless, the composition of the scene is still clearly legible.

Migration

The next scene – the middle scene on the right-hand side – represents Migration. The depiction of a refugee family consisting of a woman and her daughter, and a man who is probably the woman's father, is reminiscent above all of scenes during the First World War, when thousands of Slovene families were forced overnight to leave the war zone in the west of the country and flee into the interior. In most cases all they managed to save of their property was what they were able to carry with them. This family, without a man to take care of it (perhaps he is already lying dead in a trench somewhere), has only saved a few meagre possessions (Podbevšek, 1941: 52).
Matching the events of the scene, a dark elongated cloud is depicted above the family, with only a little light shining

3 The artist made a whole series of detailed studies for the ceiling painting. For the most part these were charcoal studies or studies in pastel and coloured chalk, although some were done in oils.
4 Jakopič went abroad at the beginning of September and returned home in the middle of the month, without having begun the preliminary designs. Following urgent messages from the Municipal Works Office, Jakopič is thought to have begun preparing cartoons in mid-September and transferred them to the ceiling by the end of the month. This work is also thought to have progressed slowly, with the scaffolding having to be removed and repositioned several times, which probably further prolonged the execution of the painting. Jakopič was even reproached with only having his assistant working on the ceiling painting. Reply of the Municipal Works Office to an open letter from Mr Rihard Jakopič (undated). SI ZAL LJU 489, City of Ljubljana, general municipal registry, fasc. 2036, fol. 590.
5 Another reason was probably the constant disagreements between the client and the artist over the payment of an advance and payment for the work done. In late December 1927, as a result of this non-payment, Jakopič wrote an open letter to the government commissioner at Ljubljana Town Hall entitled "An artist and his rights", which was published on 21 December 1927 in the newspapers Jutro and Slovenec, causing considerable embarrassment to the municipal authorities. Jakopič even asked his fellow artists Jama, Sternen, Vesel and Tratnik for statements on his work for the ceiling painting, and all of them expressed positive opinions on it (Podbevšek, 1983: 391–396).
6 From Jakopič's letter to the Municipal Works Department of 19 November 1928 (Podbevšek, 1983: 399).
7 Letter from the Municipal Works Department to Rihard Jakopič (undated). SI ZAL LJU 489, City of Ljubljana, general municipal registry, fasc. 2036, fol. 590.
8 The author's knowledge of the technique of painting on fresh plaster, as it appears in the literature, was clearly lacking, since the use of tempera paints when painting on fresh plaster does not make technological sense.
9 In 1941, when Podbevšek described the state of the painting, the degradation was already so great that the work of art was practically destroyed and survived only in some individual scenes (Podbevšek, 1941: 49).
10 "It did not happen at my will, but at the will of others!" explained the artist. "They knew better than I did about everything" (Podbevšek, 1941: 50).
11 He later wrote, in correspondence with the Municipal Works Office, that he had accepted the commission in order to give to his native city a large-scale work of art that would be accessible to everyone.
12 "If Jakopič had realised his first concept, he would perhaps have created a literary work of art that without extensive commentary would, from the moment of its creation, have remained alien to those for whom it was made. He therefore created a work deriving from contemporary reality that addressed its problems squarely. As a result, the work is perhaps not as traditionally beautiful as many would wish, but because of this it is directly alive as a mirror and as a factor (Stele, 1929: 30). In this idea, the artist also envisaged his own self-portrait, in which he is shown looking back and, with his left hand, beckoning to people from the era of his youth, while with his right hand he points ahead, to where scenes from the technical and cultural milieu of modern labour and industry indicate a new era (Podbevšek, 1941: 42).
13 Just as this building and the whole existential milieu that caused it and will use it are contemporarily real, so is the content of the realised concept real, and bitterly so (Stele, 1929: 30).
14 This is not typical for Jakopič, whose orientation was otherwise decidedly colourist.
15 A study of the head of the homeless man perhaps reveals a self-portrait (Jakopič, 1929: 47).

through it: the times ahead are dark and difficult.
The central figure in the scene – the woman, who carries the heaviest burden – is a hymn to Slovene mothers and mothers in general. The painter gave this group an important role, since the sun above the clouds illuminates all the other scenes. Because of the importance of this sunlight, Jakopič later began to devote more attention to the tonal mood of the other scenes.

Construction

The scene representing Construction on the opposite side of the ceiling vault shows three workmen in a triangular composition endeavouring to erect a scaffolding. The two men in the background are supporting the pole, while their colleague in the foreground tries to place it upright. The artist may have found inspiration for this scene on the Meksika building site itself, given that the complex was still under construction when he was painting the vaulted ceiling of the entrance passage.

Labour

The content of this scene is very simple. Two labourers are breaking rocks with picks while a third piles the rocks into a heap with a shovel. Jakopič chose this scene as an allegory of the hard, tiring work that everyone must do if they wish to create for themselves a happy and satisfying life. The surviving studies reveal that the artist focused closely on the pose of the figures in order to emphasise the hard, physical nature of their labour.

The Family

The final scene on the left-hand (north) side of the ceiling vault shows a family in a cheerful mood, lit by the sun. An older child holds his mother's skirt as he plays with a puppy. A younger child wriggles animatedly in her mother's arms. The father is slightly removed from the family group and sits lost in thought, resting after a hard day's work providing for his family. This farmyard scene is considered to be a faithful reflection of Jakopič's idea of the family (Podbevšek, 1941: 54).
The illusionistic depiction of the sky on the crown of the vault was intended to recreate the atmosphere above the individual scenes. "Above the Homeless is a floating cloud; above the Sower the clouds are gathered in small groups like in springtime; above the Migration scene there is a heavy dark cloud that renders the burden of the main figure even heavier; above the Construction scene are thin, wispy clouds – the stuffy atmosphere of the city; above the Labour scene is a blue sky and only a few small clouds, on what is clearly a hot day; and in the Family scene the clouds are gathered like a garland around the mother and child" (Jakopič, 1929: 33).
The painting, which was completed in November 1928, just a year before the artist's 60th birthday, was enthusiastically received both by critics and by the general public. The art historian and conservator France Stele wrote at the time that, through his recent act of painting the vaulted ceiling of the Meksika building, Jakopič had overturned the opinion and belief prevalent in Slovene art that an Impressionist was incapable of a monumental production. He cited the artist's own statement: "Everything I have done up to this point has been mere studies, preparation, but this work is intended as an artistic act, meaning that experiences from life and nature have matured in me and I have expressed them. In this sense, this work was for me a true fulfilment" (Stele, 1929: 30). This work was also meant to be the fulfilment of the long-cherished hopes of Slovene art. "The work was not an easy one for Jakopič, since he lacked 'practice'," Stele goes on to say, adding that "people like to think that an authorised artist must know everything, and the idea that lengthy preparations are required for a specific task, or that the artist might even have to study, seems funny to them. For this reason the citizens of Ljubljana looked askance at the long preparations for this work, in which six whole months passed before the first brushstroke was applied, and perhaps even more so when the execution of the work took an entire season, since in the opinion of the public a work like this could be painted in a single month. . . . In the end Jakopič achieved, in the tectonic sense, the illusion of a free view below the sky within the actual frame of the cornice, the walls of the passage and the arched openings at either end. His final act, however, was to succeed in subordinating the painting to the plane and the wall as perfectly as only the illusionists of the Baroque knew how. . . . The unanimous verdict of connoisseurs is that Slovene art has created no greater work than this, in the sphere of monumental painting, since the period of Baroque illusionism" (Stele, 1929: 30–31).

Starting points of the conservation-restoration project

Planning of the conservation-restoration intervention on Jakopič's painting began simultaneously with planning of the comprehensive restoration of the façade of the Meksika building in 2007. It was then, as part of the conservation-restoration project, that the first probes and scientific investigations of the exterior of the building as a whole were conducted, including probes and scientific investigations of the painting on the vaulted ceiling of the entrance passage. The preparation of the conservation-restoration project was monitored by a review panel consisting of Ivan Bogovčič and Robert Peskar and by the consultant Beti Žerovc, who has also been involved in discussions on the question of the conservation of Jakopič's painting. This is a complex and remarkable work by one of the key Slovene artists of the twentieth century, and at the same time a rarity, not only in Jakopič's oeuvre but also within the context of Slovene Impressionism. "It is an isolated example not only in terms of type, as a large wall painting, but also as a publicly commissioned work of such a scale. We simply do not have any other works of this type where 'Slovene Impressionism' – putting it roughly – is accessible to all, literally 'from the street'. At the same time, the painting represents a rarity in the sense of being an integrated work of art that merges with the architecture into a high-quality whole" (Žerovc, 2007: 1). In view of the poor state of the painting and the possibility of its total loss in the future, the principal focus of the discussion was on the detachment and adequate storage of the work and its replacement on the vaulted ceiling with a work that would maintain the spirit of the age and provide visual pleasure to the inhabitants of the Meksika building and passers-by (Žerovc, 2007: 1). Any attempt to aesthetically supplement the original on the basis of the artist's studies would overpower Jakopič's own work. It was therefore proposed that a selected scene or several scenes be removed and safely stored in one of the national galleries. At the same time, it was proposed that new plaster should be prepared at the site, so as to ensure a good basis on which the work could be repainted on the vault on the basis of Jakopič's surviving studies. A vault painting executed in this way would, it was considered, wholly complement the commemorative spirit of the Meksika building (Bogovčič, 2007). By supplementing the painting *in situ*, while attempting to fully re-establish the original state, we would undoubtedly be left without Jakopič's painting, since in view of the existing material, such an intervention could only be an interpretation (Žerovc, 2007: 2). Six years passed, however, between the discussion about the fate of Jakopič's painting and the start of the renovation of the building's exterior, while the renovation itself then took a further six years, with the result that we did not return to Jakopič's painting until 2018. Regarding the detachment of individual scenes, their maintenance and presentation to the public would have been questionable because of their size. Considering the fact that the work is a rare Impressionist subject by one of the best known Slovene painters of the twentieth century, and on the basis of the international doctrine that states that wall paintings are an integral part of monuments and should therefore be conserved *in situ*,[16] the competent monument protection service opted instead for a minimal conservation-restoration intervention *in situ* which would avoid an adverse impact on the authenticity of either the material or the subject of the work.

The conservation-restoration intervention in 2019

It is interesting that, despite the rapid deterioration of the painting and efforts to preserve it, no information about earlier restoration interventions has been found in written sources. It was not until 2007 that samples were taken for the needs of scientific investigations and attempts were made to clean and consolidate the painting[17] for the purposes of the preparation of the conservation-restoration project for the renovation of the building as a whole. Given that the colours had apparently faded within a year of the painting's completion, the state of the colours in the painting in 2019 was, unsurprisingly, largely monochrome. Shades from brown and yellow to red had survived, while the blue of the sky had almost entirely disappeared.

State of the painting before the conservation-restoration intervention in 2019

The surface area of the barrel vault[18] covering the passage is 82.5 m^2. The support for the plaster consists of wooden planks overlaid with reeds and coarse plaster.[19] Above the vault there is an empty space, although this is not accessible. The *intonaco* is roughly smoothed and stable, although thin longitudinal cracks are present along the vault. A larger crack, where some plaster had fallen away, had formed above the cornice, where the curve of the vault begins. Abrasion of the surface as a result of dust particles carried by the wind from the street was particularly evident in the Sower (Fig. 14), Construction, Family and Refugees scenes. The adherence to the fine plaster is poorer. The surface of the painting was covered with dirt and anomalies including insect cocoons, soot and smog from the street. We do not know exactly what the painting was like when it was created but we are able to say that the blue sky has deteriorated to a large extent and that the figures are merely a pale shadow of the true Impressionist painting (Figs 15, 16). The

16 Detachment and transfer are dangerous, drastic and irreversible operations that severely affect the physical composition, material structure and aesthetic characteristics of wall paintings. These operations are, therefore, only justifiable in extreme cases when all options of *in situ treatment are not viable (Principles for the Preservation and Conservation/Restoration of Wall Paintings, ICOMOS, October 2003).*

17 In the Family and Construction scenes it was possible to trace five visible attempts at cleaning and consolidation carried out by the ZVKDS Restoration Centre.

18 The passage is 10.5 m long and 4.85 m wide. The height of the barrel vault is 2.5 m.

19 Nemec reports that the reeds are laid very sparsely in sample MEK7 (Nemec et al. 2007). We were also able to observe this at the point where plaster had fallen away.

scenes facing the busy road are less visible because of the abraded sections (Refugees and Sower), while the scenes closer to the inner courtyard are better preserved (Family and Labour). Following an examination of photographic documentation from 2001 and 2007[20] and the artist's own drawings, it is evident that extensive deterioration of the painting occurred shortly after its creation and is not something that has only happened in recent years (Fig. 17).

Scientific investigations

For the purpose of analysing the material composition of the support and paint strata, nine samples of plaster with elements of the paint layer on them were examined by the ZVKDS Scientific Department at the start of the intervention in 2019. These were: four samples from the Construction scene, four samples from the Labour scene and a larger sample of plaster, designated MEK 6, that was taken from the Construction scene in 2007 (Gutman, Levstik, 2019). Sample MEK 6 pointed to a carbonate composition of the aggregate (Table 1, Fig.18). The binder of the coarse plaster is lime-based with a cement clinker additive. The presence of a carbonate aggregate and lime binder was also identified in the fine plaster, although the top layer had almost entirely been replaced by calcium sulphate dihydrate (gypsum).[21] The paint layer consists of a single stratum 15–50 µm thick, without overpaintings (Fig.19). With the help of FTIR (Fourier-transform infrared spectroscopy) analysis, the binder was identified as a drying oil. There is little binder, as can be seen from the samples designated MEK 31, MEK 32 and MEK 37. The pigments Prussian blue and barium sulphate were used for the blue background. The presence of calcium oxalate, a product of the decomposition of calcite, in all the examined samples is probably the consequence of the degradation of organic matter in the paint layer.

The information in the archives regarding the use of the tempera technique was refuted by the results of the scientific investigations carried out before the conservation-restoration intervention, since the latter proved that Jakopič had painted with oil paints on dry intonaco (Gutman Levstik, 2019). We are unable to identify the type of drying oil used with the methods selected. It is evident that the painter lacked experience with painting on plaster.

Tests

Work on the painting began with tests of the resistance of the paint layer by means of swab tests.[22] Powdering of the paint layer was observed. The adherence of the paint (pigment with binder) to the plaster was poorer in the case of charcoal black and sienna red. In order to protect the scenes and conserve the powdering pigments as far as possible,[23] it was necessary to find a suitable consolidation method. An attempt at pre-consolidation using fu-nori algae[24] in various concentrations was unsatisfactory, since it failed to consolidate the pigments.[25] An attempt to consolidate the paint layer using ammonium oxalate was likewise unsatisfactory, since a white haze formed on the surface following removal of the cellulose poultice.[26] We also carried out swab tests to ascertain the effectiveness of consolidation on samplers and via *in situ* tests.[27] We also carried out a test retouching.

20 Archives of Blaž Šeme.
21 Calcium sulphate dihydrate is found by Fourier-transform infrared spectroscopy (FTIR) and Raman spectroscopy (RS) in all samples, except in sample MEK 37 in the case of RS.
22 Tests with cotton buds.
23 It is difficult to talk about a paint layer, since very little binder has remained.
24 Japanese marine algae, Kremer Pigmente GmbH & Co. KG.
25 Even after consolidation with a 2% aqueous solution of fu-nori algae, the pigments remained on the cotton bud.
26 Procedure with a 5% solution of ammonium oxalate in a cellulose poultice.
27 Tests carried out in conjunction with ZAG.

SAMPLE	THICKNESS	COMPOSITION	BINDER	RATIO aggregate : lime	OTHER
MEK6 – fine plaster	6 mm	– carbonate grains 0.5–0.8 mm – silicate grains	lime	2 : 1	– calcium sulphate – gypsum top of layer 0.5–0.8 mm)
MEK6 – coarse plaster		carbonate grains 0.2–2 mm	– lime with lumps – cement clinker as additive	binder predominates	cracked and porous, gypsum in cracks

Table 1: Review of composition of supporting plasters on a selected sample

STRATUM	STRATUM	VISIBLE COLOUR	FTIR (different extractions, collectively)	RAMAN
MEK 31	Construction/background around the pole held by the central figure			
	stratum 2 – c. layer	blue	– gypsum – calcium oxalate – drying oil – Prussian blue – carboxylates – calcite	– Prussian blue – barium sulphate – gypsum
	stratum 1 – plaster	/	/	/
MEK 32	Construction/right elbow of central figure			
	stratum 2 – c. layer	ochre	– gypsum – calcite – calcium oxalate – drying oil	– hematite – goethite – charcoal black – gypsum
	stratum 1 – plaster	/	/	/
MEK 33	Construction/edge of collar, right-hand figure, lower layer, probably the colour of the clothing or flesh colour			
	stratum 3	red	– gypsum – calcium oxalate	– hematite – charcoal black – gypsum
	stratum 2	black	/	– charcoal black – gypsum
	stratum 1	plaster	/	/
MEK 34	Construction/right-hand figure/pole in arms			
	stratum 2	black	– gypsum – calcite – calcium oxalate – unidentified substance	– charcoal black – hematite – gypsum
	stratum 1	plaster	/	/
MEK 39	Labour/background to left of labourer in centre			
	stratum 2	blue, white	workpiece area: – gypsum – calcium oxalate – calcite – dolomite	– Prussian blue1 – feldspar – gypsum – charcoal black – barium sulphate
	stratum 1	plaster		gypsum

Table 2: Review of composition of paint layers on selected samples

Removal of dirt

We cleaned the sky and background of the individual scenes using steam and a sponge, and in this way removed considerable amount of unbound dirt. It was not possible to remove all dirt from the coarse surface of the plaster, but additional, more thorough cleaning would also have removed the pigments, so we therefore satisfied ourselves with the result achieved. In the case of the scenes with figures, we were even more cautious. We removed the dirt through Japanese paper by tapping with damp sponges, and in this way removed the easily removable particles. Removal of salts using cellulose poultices would not have been reasonable or feasible. The fact that water-soluble salts have migrated from deeper layers to the surface is not unimportant, but the process of salt formation cannot be halted, while removal through the paint layer would have caused irreparable changes to the latter. Tests with an aqueous poultice showed that the surface of the painting is water-repellent. As a result, an aqueous poultice does not last more than five minutes on the surface.[28]

Analyses of the effectiveness of consolidation of the paint layer and colour changes when using various consolidants

We carried out the analysis in conjunction with the Building and Civil Engineering Institute (ZAG). The measurements were carried out before and after consolidation. A test consolidation was carried out on yellow and red areas of the Migration scene (Figs 20 and 21). We used ammonium caseinate (A) and two acrylic consolidants that are more suitable for exteriors (B, C).[29] Measurements of the success of consolidation[30] showed minimal differences between the consolidants. The area with the greatest strength following consolidation, in comparison to unconsolidated areas, was field A, which was consolidated with 1.5% ammonium caseinate. In the areas consolidated with a 4% solution of Lascaux Medium for Consolidation (MFC)31 and a 4% solution of Primal,[32] the strength did not significantly change, or was within the minimum deviation range (Škrlep, 2019). We observed colour differences between the unconsolidated and consolidated areas. Greater divergences were observed in the case of ammonium caseinate, as a result of which the colours darkened and the surface took on a damp appearance. Colour changes[33] were smaller in the case of acrylic binders, and practically no difference could be observed. The difference between the results of the two different acrylic binders was negligible (Škrlep, 2019).

Consolidation of the paint layer

The selection of a consolidant required serious consideration. The requirement was for a consolidant that is suitable for outdoor paintings, with the best possible ageing characteristics and minimal visual changes, in other words the smallest possible change in the refractive index following application. We took into account the results of the previous analyses. Ammonium caseinate is not the most suitable binder for a painting in an entrance passage, since it could bind solid particles from the street. The tests also showed that colours darken after consolidation with ammonium caseinate. MFC consolidant, which has not been on the market as long as Primal, is claimed by the manufacturer to have good penetration and vapour permeability, and also works very well in practice. By means of additional tests, we proved its effectiveness, since in comparison to Primal it consolidates well even in very low percentage solutions.
We consolidated the painting with a single application of a 4% solution of MFC. Application was with a brush over Japanese paper. Application of the consolidant was minimal, so there was no fear that an airtight film would form on the surface.

Filling and consolidation of plaster (arriccio and intonaco)

We repaired the longitudinal crack above the cornice where some plaster had also fallen away (*arriccio* and *intonaco*). The plaster was consolidated using CaLoSil lime-based consolidant,[34] filled with traditional lime mortar and smoothed to a rough surface as similar as possible to the original. A crack (fissure) had formed at the point where the stone gateway meets the ceiling vault, and there was some localised falling away of plaster. Here we installed new reed lathing and filled the plaster with coarse mortar in several levels. The joint was left open so as to allow the materials to act independently. The newly filled places were then retouched.

28 Or there is some other physical reason for this.
29 A = 1.5% ammonium caseinate, B = 4% Primal CM330, C = 4% MFC.
30 The effectiveness of consolidation is evaluated via measurements of repulsive hardness. Measurements are carried out using an Equotip 3 (Proceq) portable hardness tester fitted with a D probe with an impact energy of 11 Nmm.
31 Lascaux Medium for Consolidation (Lascaux Colors & Restauro, Switzerland; hereinafter: MFC) is an aqueous dispersion of an acrylic copolymer developed in 2005, https://lascaux.ch/en/products/art-handling-and-restauro/synthetic-resins-and-dispersions.
32 Primal CM330, available from Imo d.o.o., Šentjošt nad Horjulom.
33 Total colour difference (ΔE*), change in lightness (ΔL*), change in the red-green axis (Δa*) and change in the blue-yellow axis (Δb*) occurred before consolidation in areas A, B and C of the yellow and red test field and 11 days after it. The measurements were carried out using a Konica Minolta spectrophotometer with a 10° angle of observation and D65 standard light. The result is given as the average of five measurements for each individual colour and each individual consolidant.
34 Nano-lime, IBZ-Salzchemie Gmbh & Co. KG.

Retouching – filling damaged areas

The state of the painting before the minimal retouching that was urgently necessary for the final aesthetic presentation of the work, was carefully photo-documented so as to facilitate later study. At a consultation with the expert panel,[35] we decided that a test retouching should be prepared of a jug (in the Family scene), using two different methods. The first method involved powdered pigments and an MFC binder, while the second involved the application of soft pulverised pastels with a brush. The first, traditional retouching method proved to be more suitable, since the resulting retouching is more durable.
Owing to the lack of information on the actual appearance of Jakopič's painting[36] at the time it was created, we carried out retouching according to the minimalist principle, where, applying tiny dots with a brush, we only filled those places where paint was no longer present, in such a way as to re-establish, in some parts of the painting, the anatomical structure of the figures, which before the intervention were rather illegible even from a short distance. The retouching is not visible to the naked eye and is a shade lighter than the original. We also slightly concealed the obtrusive lighter parts of the Sower scene, where the artist had changed the size and position of the figure, although these initially seemed to be an abrasion of the surfaces. It was only after close examination that we established that the figure had been moved. The extent of the retouching is minimal and limited to areas where retouching was urgently necessary. The greatest amount of retouching was necessary in the Sower, Refugees and Migration scenes, where a considerable part of the surface was abraded. We used a 1% solution of MFC as the binder.[37]
With the described conservation-restoration intervention, in which the least invasive procedures and materials were used, both from the point of view of cleaning and consolidation and from the point of view of retouching, we have preserved to the greatest possible extent the authenticity of Jakopič's painting. After cleaning and minimal retouching, the individual figural scenes have become more intelligible to the viewer (Figs 22 and 23).

35 Expert panel: Tatjana Adamič and Tjaša Pristov of the Ljubljana regional unit of the ZVKDS, Anita Kavčič, Martina Lesar Kikelj and Ajda Mladenovič of the ZVKDS Restoration Centre, Andrej Smrekar of the National Gallery and Beti Žerovc of the History of Art Department at the University of Ljubljana Faculty of Arts.
36 The only surviving photographs from the period of the creation of the work are the black-and-white photographs published in the magazine *Dom in svet in 1929. The blue sky was already more legible after cleaning, but more retouching in the area of the blue sky would have meant its reconstruction, which was not appropriate given the lack of information.*
37 MFC has a very good bond strength to the consolidated painting even as a 1% solution and was the best choice in comparison to other acrylic media, including from the point of view of compatibility and the minimal application of different materials.

Causes of the deterioration of Jakopič's painting

After completing the scientific investigations and identifying Jakopič's technique and form of artistic expression, we decided, in the course of the conservation-restoration intervention, to research in more detail the causes of the painting's deterioration. A comparison of stratigraphies and analysis of materials taken from the painting in 2007 and in 2019 (Gutman Levstik, 2019; Nemec et al., 2007) led us, after consultation of specialist literature, to a number of possible causes of the deterioration. In several samples the presence of a binder was not observed, while in others we identified a drying oil. Binder was observed above all in the samples taken in 2007, while almost none could be observed in the samples taken in 2019. Moisture from the atmosphere or the support of a painting can, when sealed beneath a film, accelerate the deterioration of the oil film (Hudoklin, 1958). This leads us to the idea that the degradation of the binder continued in this period, despite past deterioration. The hardening of drying oil after application takes place in polymerisation, autoxidation and cross-linking processes, which continue over the years, even when the binder is already dry to the touch (Juita et al., 2012; Lazzari and Chiantore, 1999). The degradation of drying oil can be understood as a continuation of autoxidation: macromolecules shorten and aldehydes and carboxylic acids form (Modugno et al., 2019; Lazzari and Chiantore, 1999). Degradation is accelerated by raised atmospheric humidity, as a result of which the quantity of oxidative products in the oil film increases (Juita et al., 2012). Because the painting is outside, it is directly exposed to changes in atmospheric humidity. Fortunately, it is not directly exposed to precipitation, which would most probably have accelerated its disintegration even further. The polymer chains of drying oils are broken even more quickly in damp conditions on contact with alkaline (base) materials (Jones, 2004), which include plasters.
Alkaline surfaces also cause poorer adhesion of paint strata, and are therefore not suitable supports for oil paints (Jones, 2004). It is known that reactions of a drying oil with damp, oxygen or environmental pollutants (e.g. NO_2, SO_2, CO_2) can accelerate the degradation of paint strata (Hermans, 2017). UV radiation and exposure to nitric oxide (NO) and sulphur dioxide (SO_2), both important atmospheric pollutants that are certainly present in large quantities on such a busy road, initially accelerate polymerisation and cross-linking and subsequently activate the splitting of macromolecules of fatty acids as a result of accelerated oxidation. The influence of pollutants is also visible in this painting, since the part that is closer to the road is in a poorer state

of conservation than the part on the inner courtyard side.[38] Drying oil continues to break down until the formation of oxalic acid, which creates oxalates with metal ions from the pigments and fillers, as a result of which the painting takes on a "chalky" appearance on the surface (Pappas and Fischer, 1975).

We observed the presence of calcium oxalate in all the analysed points of the painting. In contrast to traditional oil paintings, in which we frequently also observe the presence of various metal carboxylates (soaps) originating from pigments (Modugno et al., 2019; Noble, 2019), we did not observe the presence of metal carboxylates in the FTIR spectra from Jakopič's painting. The degradation of paint strata can also be influenced by the pigments themselves. Specific metals in pigments can catalyse (accelerate) the drying and later degradation of the oil-based binder (Modugno et al., 2019); these include cobalt, manganese, iron, aluminium, barium, potassium and calcium (Soucek et al., 2012). The presence of different pigments therefore has a significant influence on the state of conservation of oil paints (Bonaduce et al., 2012; Keune et al., 2008). Pigments can cause degradation of paint strata in several ways: either by fading or by affecting the binder (Jones, 2004). In the case of Jakopič's painting, we observed most damage in the blue areas painted with Prussian blue, and in the red and ochre areas painted using iron oxide pigments. All the pigments mentioned are iron-based. Barium sulphate is also present in the blue strata. It is evident from the stratigraphies of the cross sections that the paint layer continued to deteriorate between 2007 and 2019 (Gutman Levstik, 2019; Nemec et al., 2007). The paint strata are thinner and fewer particles are visible. The rapid deterioration and poor state of conservation of the paint strata may also have been affected by conditions at the time the painting was being made, since we know that the work was carried out in late autumn and that the oil was drying in months that were cold and damp. In cold weather (at temperatures of less than 10°C) oil paints become more viscous and dry with more difficulty, which prolongs the hardening time (www.thebalancesmb.com). Once oil paints have dried, they become brittle (Jones, 2004), especially at temperatures below freezing point, although oil freezes at lower temperatures than water (www.thebalancesmb.com). Temperature fluctuations also cause stress to paint strata, particularly in dry atmospheres (Jones, 2004), since there is a contraction and expansion of materials that can lead to mechanical damage. This could also be connected to the fact that Jakopič was working in late autumn. On the basis of the above, we see that numerous causes are possible for the deterioration of the painting on the vaulted ceiling of the entrance passage of the Meksika building, while the most likely answer is that a combination of different factors contributed to the degradation of the painting.

38 See the section "State of the painting before the conservation-restoration intervention in 2019".

Summary

Artistic decoration was an indispensable part of architectural creativity during the interwar period. It played a major role in the works of the architect Vladimir Šubic, whose important buildings included the Meksika residential complex on Ljubljana's present-day Njegoševa Cesta. Painted decoration on the Meksika building is limited to the painting of the vaulted ceiling of the entrance passage by the artist Rihard Jakopič, a commission that represented a unique challenge for Jakopič, whose primary medium was the canvas. Beginning in August 1927, Jakopič produced more than a hundred study drawings, paintings and cartoons. He began work on the ceiling in September 1927. By the end of October he had completed his designs both of the work as a whole and in six individual sets. Jakopič was given the commission before construction of the building was complete, and found inspiration in the construction process itself. The fact that the painting began to deteriorate shortly after completion is no surprise, since Jakopič had evidently not mastered the technique of painting on plaster and used drying oil as a binder, which caused a deterioration of the painting shortly after work on it was complete.

The painting measures 82.5 m^2 and was executed on plaster on reeds overlaying the wooden frame of the barrel vault. Despite small cracks at the foot of the vault, the plaster is stable. Although Jakopič's painting attracted considerable interest at the time of its creation, both among critics and among the general public, and while its early deterioration was also the subject of considerable discussion, no restoration interventions were carried out on the painting in the past. The first investigative probes were carried out in 2007 as part of the preparation of a conservation-restoration project for the comprehensive renovation of the exterior of the Meksika building, which also included a conservation-restoration intervention on Jakopič's painting on the ceiling of the entrance passage. Following renovation of the building's street and courtyard frontages, which took place from 2013 until 2019, the conservation-restoration intervention on Jakopič's painting began in September 2019. It was clear as soon as we began planning the intervention that we were dealing with a non-traditional wall painting. Scientific investigations of the paint layer and plaster carried out in parallel at the Restoration Centre of the Institute for the Protection of Cultural Heritage of Slovenia (ZVKDS) only confirmed the presence of drying oil as a binder. The degradation of paint strata could also have been influenced by the pigments themselves, above all Prussian blue and iron oxide pigments. These contain iron, which accelerates the breakdown of the oil binder, particularly when combined with barium sulphate, which was also identified in the blue strata.

A further challenge for us was the powdering paint layer covered by surface dirt. Analysis of the effectiveness of consolidation of paint layers and colour changes resulting from the use of different consolidants was therefore conducted on test applications in conjunction with the Building and Civil Engineering Institute (ZAG). The use of "traditional" consolidants was not appropriate because the work was not done in the lime technique. We therefore selected Lascaux Medium for Consolidation (MFC), which tests revealed to be the best-quality solution. Conservation-restoration of the painting was limited to the use of only the most urgent mechanical procedures such as cleaning with water vapour and consolidation using a minimal amount of the consolidation medium. Filling of damaged areas of plaster was followed by minimal retouching with pigments in binder. The paint layer is only partly preserved, so any larger intervention would not make sense, given that the aim was to preserve the authenticity of Jakopič's painting to the greatest possible extent. Similarly, only local retouching was carried out, using the same material as was used for consolidation.

Jakopič's monumental Impressionist painting is the only example of its type in Slovenia, so there was no possibility of referring to similar cases or solutions. We consider that the intervention in question represented a high-quality and modern approach, and that it followed the highest conservation standards. By preserving Jakopič's authentic painting to the greatest possible extent, we have also preserved the memory of the artist's somewhat bitter experience of painting on plaster, a technique in which he was not sufficiently skilled. A review of the literature on possible causes of deterioration and the scientific investigations carried out reveals that the deterioration may have been the consequence of meteorological factors and pollution, and also of the selection of an incorrect medium and an unsuitable time of year.

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Maja Avguštin

Primeri prezentacij in njihova problematika na fasadah meščanskih hiš

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Izvleček

Ohranjanje materialnih ostankov, ki so v posameznih primerih edini materialni dokaz o stavbnem razvoju in estetski podobi obravnavanega objekta, je v varstvu kulturne dediščine izjemnega pomena. S celostnim varovanjem dediščine se ohranja direkten dostop do nadaljnjih in potencialno novih načinov raziskav dediščine. Vsakršne rekonstrukcije so zato zgolj približni posnetki najdb, ki nikakor ne morejo enakovredno nadomestiti odstranjenih izvornih sledi.
Termin obnova kulturne dediščine v našem prostoru še vedno prevečkrat pomeni predvsem gradbeno obnovo z restavriranimi oz. rekonstruiranimi detajli, ki nikakor ne more več zadostno opredeliti kompleksnosti varstva dediščine in posegov na njej. V sklepnem delu članka je zato podan predlog, da se na varovanih objektih kulturne dediščine še bolj uveljavi konservatorsko-restavratorski pristop tudi pri obnovi ostenja, fasade, konstrukcij ipd.

Uvod

Mestna jedra danes združujejo objekte, ki so nastajali in se razvijali predvsem v obdobju od 16. do prvih desetletij 20. stoletja. Njihov arhitekturni razvoj in likovno podobo je mogoče prepoznavati in opazovati prav na njihovih glavnih fasadah. Te so bile v preteklosti osrednje nosilke sodobnih trendov v oblikovanju meščanske arhitekture, hkrati pa ustvarjajo notranje ostenje celotnega mestnega jedra. Fasade meščanskih hiš so torej pravi palimpsesti preteklih obdobij. Ohranjanje materialnih ostankov, ki so v posameznih primerih edini materialni dokaz o razvoju in estetski podobi posameznega objekta, je zato izjemnega pomena. S celovitim varovanjem dediščine se ohranja direkten dostop do nadaljnjih in potencialno novih načinov raziskav dediščine. Vsakršne rekonstrukcije so zato zgolj približni posnetki najdb in nikakor ne morejo enakovredno nadomestiti odstranjenih izvornih sledi.
Delujem na območju Gorenjske, zato so predstavljeni primeri s tega območja, vendar je mogoče podobne odločitve in izbore prezentacij najti tudi drugod. Prispevek se osredotoča na različne pristope k obnovi fasad in na dileme, ki so ob tem nastajale v preteklosti in danes.
V gorenjskih mestnih jedrih se najpogosteje srečamo s t. i. muzejsko prezentacijo, ki zajema vse najdbe ne glede na fazo razvoja objekta. Vsi ti prikazi skušajo gledalcu predati sporočilo o stavbnem razvoju posameznega objekta in likovni podobi njegove fasade. Nekatere fasade so tako postale rekonstruirane muzejske prezentacije, kjer je objekt postal nosilec razstave svojega stavbnega razvoja.
Na podlagi predstavljenih varovanih sestavin fasade in različnih konservatorsko-restavratorskih pristopov je vsak posamezen tip prezentacije razdelan v smislu kvalitete in preglednosti prezentacije najdb, varovanja zgodovinskih plasti, avtentičnosti materialov in oblikovanja fasade.

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Oris razvoja načel in metodologije obnove in prezentacije fasad skozi razvoj spomeniškovarstvene službe

Riegla, Dvořaka in Dehia je združevalo skupno prizadevanje za uveljavitev temeljne zahteve po ohranjanju avtentičnosti spomenikov in dosledno spoštovanje vseh spomeniških prvin, ne glede na čas njihovega nastanka, umetnostni slog ali pomembnost spomenika. Od tod znamenite Dehiove besede »Konservieren, nicht restavrieren« in Dvořakovo nedvoumno mnenje, da je eden izmed naglavnih grehov neukega ljudstva in napačno usmerjenih prizadevanj strokovnjakov prav »čiščenje in rekonstruiranje prvotnega stanja«. Čeprav se je Dvořak zavedal, da meje med konserviranjem in restavriranjem ni mogoče na splošno določiti, je zgodovinsko verodostojnost določil za osrednjo spomeniško normo.[1]

France Stele je prispeval temeljna dela slovenske konservatorske stroke, s katerimi se je izobrazila in v skladu z njimi delovala večina povojnih konservatorjev. Prvo njegovo delo, ki je nastalo leta 1928 z naslovom *Osnovna načela varstva spomenikov*, povzema bistvena Rieglova, Dvořakova in Dehieva načela oz. navodila, ki naj se jih drži tako laična javnost kakor tudi strokovnjaki. Stele se je zavzemal za to, da je pomembno ohranjati stare ansamble, pri čemer je meril tako na notranjo opremo kakor tudi na mestne trge, skupine stavb itd. Kot sedmo načelo je izpostavil, naj se moderna gradiva ne uporabljajo v zvezi s starimi spomeniki. Prav tako je poudaril, naj se nikdar ne uporabljajo predmeti iz tako imenovanega neestetskega, nadomestnega gradiva, kakor so gips, tiskane reprodukcije ipd. Kljub poudarjanju pomena varovanja in konserviranja pa je hkrati, za razliko od Dehia in Dvořaka, dopustil tudi možnost rekonstrukcije, vendar naj bi bila ta v takem obsegu, da se ne uničijo ali zabrišejo »dokumentarične vrednote predmetov« (Stele, 1928: 179–185).

Stele torej v določenih primerih podpira rekonstrukcijo, če je treba poenotiti izgled fasade. S tem se oddaljuje od Dehievega stališča, da je treba konservirati tako dolgo, kolikor gre, in se šele čisto na koncu po skrbni preučitvi dokumentacije in izmerah odločiti za restavracijo (Dehio, 1988: 97–98). Stele ob odločitvi za rekonstrukcijo izpostavlja tudi nujnost, da je rekonstrukcija ločena od originala, hkrati pa mora z njim ustvariti harmonično celoto (Stele, 1928).

Steletovo delo *Estetika in dokumentarnost v restavriranju spomenikov* iz leta 1955 je dokončno usmerilo takratno povojno in s tem tudi današnjo sodobno konservatorsko politiko. Stele takoj na začetku tega dela izpostavi napet in nerazrešen odnos med estetiko spomenikov, ki jo zahteva življenje na eni strani, in strogim varstvenim načelom »Konservirati in ne restavrirati!« na drugi strani. Meni, da je za povojno obdobje, v katerem se morajo konservatorji soočati s posledicami druge svetovne vojne, primernejša restavracija, saj se zgolj konservacija obstoječega stanja gospodarsko ne izide. Konservacija naj bi bila možna le, če jo upravičujejo izredne znanstvene in kulturne vrednosti. Pa še takrat želja po estetski prezentaciji pogojuje kompromis na škodo dokumentarnosti. Manj sporno (v primerjavi s slikarskimi in kiparskimi deli) se Steletu zdi vprašanje rekonstrukcije pri arhitekturi, kjer je spomenik del urbanistične celote in bi morali, če se ne bi odločili za rekonstrukcijo, vkomponirati nekaj novega. Stele se nadalje spraševanje o estetski vrednosti spomenika, ki je po njegovem enako pomembna kot dokumentarna vrednost, vendar je manjkrat strokovno obravnavana in prepoznana. Brez nje je po Steletovi oceni še tako pomembna dokumentarna zaščita spomenika manj uspešna. Konservator naj torej izbere ukrepe, ki bodo pripomogli k ohranitvi spomenika, hkrati pa ne bodo zmanjševali dokumentarne vrednosti spomenika. Enako je treba ukrepati tudi, kadar gre za ohranjanje posameznih arhitekturnih elementov, starih napisov, likovnih poudarkov na fasadah ipd. Pri prezentaciji namreč obstaja nevarnost, da s pretiravanjem in slabo razumljenimi konservatorskimi načeli lahko celo uničimo estetski potencial rešenega spomenika. Konservator naj se zato vpraša, kaj je estetski potencial spomenika. Estetski potencial spomenika s časom slabi, se spreminja in uničuje, zato je treba razumeti, da ni vezan zgolj na en slog, ikonografijo ali posamezno tehnično rešitev, ampak je rezultanta vseh teh elementov. Poleg tega je arhitekturnemu spomeniku treba dodati tudi vrednost, ki jo ima glede na lokacijo in urbanizem, znotraj katerega je postavljen.[2]

Kar se tiče konkretnih restavratorskih posegov na poslikavah, se Stele torej zavzema, da je treba varovati ohranjeno stanje brez dodelav, predelav oz. t. i. izboljšanja stanja. Pri odstranjevanju neustreznih sekundarnih posegov mora restavrator upoštevati vse materialne in tehnične elemente spomenika ter mora dobro poznati stare tehnike. Konservator se mora pri ohranjanju dediščine izogibati pretiranemu varovanju dokumentarnosti oz. na drugi strani pretirani estetizaciji, saj življenje od spomeniškega varstva pričakuje kompromis med uporabnostjo, dokumentarnostjo in estetiko (Stele, 1955: 22). Pomembna je konservatorjeva zavest, da okrnjene estetike kakega spomenika ni mogoče izpopolniti, še manj obnoviti, lahko pa s pravilno razumljeno dokumentarno konservacijo uveljavimo estetski potencial spomenika, kolikor ga čas ni oslabel. Hkrati pa estetskega potenciala ne smemo oškodovati s ponaredbami ali napačno dokumentarično obzirnostjo. Stele ob tem navaja sodobne primere neprimernega ometavanja ostenja v okviru poskusne izravnave stene ali pa na drugi strani vsesplošnega razkrivanja kamnito grajene stene. Prav tako poudarja neprimerno izvedene stike med ohranjenimi stenskimi poslikavami in na novo ometanim ostenjem. Potrdi mnenje sodobnega italijanskega konservatorja F. Forlatija, po katerem je treba najprej ohraniti staro brez podiranja in ponovnega pozidavanja ter s pripomočki sodobne tehnike vse nevidno utrditi, iz starega materiala pozidati podrto in budno paziti, da dodano ne potvarja, ter doseči, da se spomenik prezentira samo s svojim lastnim, četudi okrnjenim estetskim potencialom (Stele, 1955: 9). Stele zaključi z mislijo, da je treba določene primere doslikavanja, ki dajejo vtis enotnosti, hkrati pa estetskega značaja spomenika ne zmanjšujejo, razumeti tudi kot poziv gledalcu, naj kreativno sodeluje pri doživljanju likovne umetnine. S tem je gledalcu omogočen maksimum učinka likovne umetnine. Stele hkrati opozori tudi na avtentične materiale in načine njihove uporabe ter formulira cilj spomeniškega varstva.[3]

Za Steleta je bila torej estetska vrednost spomenika, ki jo narekuje življenje, prav tako pomembna kot dokumentarna. Restavrator sme estetsko vrednost sicer dodatno poudariti (rekonstrukcija), če le spoštuje in ohranja dokumentarno vrednost originala. Stele opozarja, da je estetska vrednost spomenika tudi v njegovi nepopolnosti in poškodovanosti, saj je estetski potencial spomenika sozvočje lika, gradiva in okolice. Konservatorski posegi morajo zato biti diskretni, nevpadljivi.

Pregled mednarodnih listin, ki so nastale v Steletovem času v zvezi s prezentacijo najdb na objektih kulturne dediščine, kaže razmeroma enotna izhodišča. Najdbe je treba vrednotiti skozi prizmo časa in aktualnih problemov obdobja, v katerem so nastale. Atenska listina (1931) tako v Splošnih načelih omenja, da najdb ponekod ne obnavljajo več, temveč samo še varujejo obstoječe stanje, da bi se izognili spremljajočim nevarnostim obnove. Listina priporoča, naj se spoštuje vsako zgodovinsko obdobje in naj se ne izključi nobeno slogovno obdobje. Če je treba pri obnovi uporabiti nove materiale, naj bodo ti vedno razpoznavni kot novi v primerjavi z originalno substanco. Pred vsemi posegi je zato treba izvesti temeljite analize vzrokov in raziskati vrste poškodb (Doktrina I, 2003: 17–24). Leta 1964, ko so se pri nas oblikovali zavodi za spomeniško varstvo, je bila sprejeta Beneška listina o ohranjanju in obnavljanju spomenikov in spomeniških območij, ki nedvoumno navaja, naj se ob restavriranju spomenika spoštujejo kakovostni prispevki vseh obdobij, saj smoter restavracije ni doseganje slogovne enotnosti. Kadar stavbo sestavlja več časovno razmaknjenih plasti, je razkrivanje ene od njih dovoljeno le izjemoma in s pogojem, da odstranjene prvine niso posebno zanimive. Beneška listina hkrati poudarja, da je restavratorstvo visoko strokoven postopek, ki se mora ustaviti tam, kjer se začenjajo domneve. Dopolnila, ki so dodana iz tehničnih in estetskih vzrokov, se morajo minimalno ločevati od originala (Doktrina I, 2003: 26–27).

Milan Železnik se je podrobneje loteval teorije spomeniškega varstva v dveh člankih, ki sta nastala v razmiku dvajsetih let. V prvem iz leta 1960 govori o varstvu prvobitne podobe spomenikov kot kompleksu posameznih sestavin, ki dajejo v medsebojnih razmerjih spomeniku njegovo bistveno, osebno podobo (Železnik, 1960/61: 48–55). Železnik je spomeniški ideal videl v slogovni enotnosti, ki je tesno povezana z izvorno funkcijo, zato je menil, da vsakršna slogovna neenotnost zgolj zapleta spomeniško problematiko. Konservator naj zato posege usmerja tako, da z njimi odstrani vse elemente, ki se ne ujemajo z bistvom spomenika, ali po potrebi doda dele, ki prispevajo k večji prvobitnosti ali integriteti spomenika (Železnik, 1960/61: 51–52). Ta metoda je bila v nasprotju s tedaj že pol stoletja staro dunajsko doktrino spomeniškega varstva, saj t. i. čiščenje hkrati pomeni tudi rekonstrukcijo. Ta pa zlahka pripelje do potvarjanja dejstev in načrtnega brisanja mlajših sledi časa. V drugem članku, ki je nastal leta 1981, Železnik v ospredje postavi termin integriteta spomenikov, ki obsega pojma celovitosti in neokrnjenosti spomenikov (Železnik, 1981: 65–66). Prispevek je nastal tik po obnovi Homanove hiše v Škofji Loki, ki je najbolj eksemplaričen primer takratnega Železnikovega razmišljanja (slika 1). Železnik se je pri obnovi fasade tega objekta soočil z likovnimi plastmi in množico najdenih arhitekturnih elementov, ki so kazali začetek in potek stavbnega in likovnega razvoja hiše vse od 15. do 20. stoletja. Odločil se je za prezentacijo in restavracijo vseh odkritih likovnih prvin fasade in vseh odkritih arhitekturnih elementov. Čiščenje spomenika do njegove prvobitne podobe bi v najbolj ekstremnem pristopu zahtevalo rušitev posameznih delov stavbe, hkrati pa bi se morali odreči ohranjanju in prezentaciji vseh najdb, ki so nastale po 16. stoletju. S tem člankom je Železnik postavil temelje konservatorske prezentacije, ki je pogosto v rabi še danes, in sicer, da prvobitna podoba spomenika zaradi vseh mlajših prezidav, dozidav in preoblikovanj ne more biti glavna naloga spomeniškega varstva, pač pa je to lahko le predstavitev vseh bistvenih elementov spomenika. Spomenik naj po obnovi tako postane odprta knjiga svoje lastne zgodovine (Železnik, 1981: 65–66). Jelka Pirkovič je ta pojav poimenovala arheološka metoda, ki je povzdignjena na raven prezentacije, kar pomeni, da se vse najdbe

1 »… Obsežnim prezidavam in rekonstrukcijam spomenikov se je treba izogibati ne le zato, ker zaradi njih uničujemo dragocene spomenike kasnejših obdobij, temveč tudi zato, ker z njimi samovoljno spreminjamo obliko in pojavnost spomenikov in jih s tem umetniško in zgodovinsko razvrednotimo … Restavriran spomenik je kot ponarejen dokument, ki povrhu vsega zgubi tudi svojo umetniško vrednost, poezijo, ubrano počutje, slikovito mikavnost. Takšno restavriranje ni ohranjanje, temveč uničevanje.« (Pirkovič, 1993: 21)

2 »… Zato ne bomo stremeli za čistoto ali polno izrazitostjo tako imenovanega stila, temveč za uveljavitev vseh elementov spoznanega estetskega potenciala, ne glede na čas nastanka, stil in gradivo … Estetski potencial arhitekture ni zasidran samo v njeni bolj ali manj kultivirani formi, v takem ali drugačnem slogu ali v bogastvu gradiva, tudi ne v zasebnem ali javnem namenu, temveč v skupnem izrazu vsega tega …« (Stele, 1955: 5–12)

3 »… Spoznanje nepravilnosti težnje restavriranja spomenikov v prvotno stanje ima svoj korelat prav tako na estetski strani; tudi prvotnega estetskega učinka ni mogoče restavrirati, ampak je pravilno samo uveljavljati ga v okviru ohranjenih potez lastnega estetskega potenciala spomenika. Zato: Konservirati, ne restavrirati, toda konservirati tudi z upoštevanjem estetskega učinka ohranjenega spomenika!« (Stele, 1955: 12–13)

prezentirajo (Pirkovič, 1993: 41). Ob tem je treba poudariti, da je ta tip arheološke/vsesplošne prezentacije v nasprotju s Steletovo predstavo o estetski prezentaciji, ki je zanj enako pomembna kot dokumentarna.

O smislu prezentacije vseh najdenih plasti in njeni estetski komponenti se je leta 1960 spraševal tudi Ivan Komelj. Menil je, da je za umetnostnega zgodovinarja rekonstrukcija nepotrebna s stališča proučevanja, saj nimamo več opraviti z avtentičnim virom, ki bi ga lahko proučevali, hkrati pa se je zavedal, da rekonstrukcija prispeva k iluziji izgubljenega spomenika. Poudaril je, da ima prezentacija trojni namen: izlušči naj prvotno umetnostno podobo spomenika, ponazori naj njegovo genezo, hkrati pa naj ohrani ali na novo ustvari ubrano razpoloženje (Komelj, 1960: 50–52). Nace Šumi je istega leta v okviru prenove mestnih jeder zapisal, da nikoli ne moremo v celoti uresničiti temeljnih načel zgodovinske arhitekture in da vedno ustvarjamo nekaj novega (Šumi, 1960: 74–76).

Steletovi učenci, konservatorji so se v šestdesetih letih 20. stoletja intenzivno ukvarjali z vprašanjem prezentacije, ohranjanjem avtentičnosti ob posegih obnove in delne rekonstrukcije. Na terenu je bilo opravljenih več poskusov prezentacije, od t. i. čiščenja do večslojne prezentacije vseh vidnih dokazov razvoja in likovne podobe objekta. Morda se je večslojna prezentacija še najbolj uveljavila prav v mestnih jedrih, kjer so naleteli na številne starejše najdbe, saj fasad lastniki skorajda nikoli niso rušili, nadevali pa so jim vsakič nov izraz ter tako sledili sodobnemu okusu in razvoju. Ob prvih raziskavah so tako restavratorji naleteli na večkrat poslikano fasado, zazidane okenske odprtine z ohranjenimi okenskimi okvirji, predelane arkadne hodnike na dvoriščih ipd. Iz poglavja *Posvet o fasadah* v publikaciji Varstvo spomenikov, št. 31, iz leta 1989 lahko razberemo, v katero smer se je razvila konservatorsko-restavratorska razprava na področju obnove fasad konec osemdesetih let 20. stoletja. Z razvojem restavratorske stroke, pojavom različnih vrst gradbenega in restavratorskega materiala, gradbenotehničnimi dilemami pri obnovi ter vse večjim vključevanjem arhitektov v konservatorske vrste se razprava v omenjeni publikaciji osredotoča predvsem na kvaliteto, funkcijo in obseg posegov ter na vzroke propadanja fasad in fasadne dekoracije ter možnosti reševanja. Iz prispevka restavratorja Iva Nemca je razvidno takratno akutno stanje odbijanja starih ometov, štukatur in drugih dekorativnih elementov na fasadah ter njihovo nadomeščanje z novimi manj primernimi materiali, izvedbo štukaturnih ornamentov v cementu ipd. Nemec opozarja na za vedno izgubljene materialne dokaze vseh slojev starih ometov, ki se drastično odbijajo in nadomeščajo z novimi ometi (Nemec, 1989: 45–46). Josip Korošec v svojem prispevku opozarja na vprašljivost prezentacije vseh faz razvoja objekta in vseh najdb na fasadi ter meni, da se ob takem načinu prezentacije spomenik spreminja v kroniko razvoja neke zgradbe, hkrati pa opozarja, da stavbe nikoli v svojem razvoju niso imele takšne barvne dekoracije (Korošec, 1989: 59–60). Iz prispevka Janeza Mikuža prav tako razberemo nestrinjanje s sodobnimi pristopi odstranjevanja ometov in nadomeščanjem z novimi, rekonstruiranimi večplastnimi prezentacijami in večnimi kompromisnimi rešitvami, ki so skoraj vedno na račun dediščine. Mikuž ocenjuje, da branje razvoja stavbe preko fasade pomeni uničenje njene zgodovinske pričevalnosti, kajti ob še tako popolni dokumentaciji in previdnem jemanju vzorcev pomeni tako razslojevanje uničenje dela substance spomenika (Mikuž, 1989: 63–70).

V devetdesetih letih 20. stoletja sta področje, o katerem razpravljamo, zaznamovali Listina o avtentičnosti iz Nare (1994) in Listina iz Burre (1999). Listina iz Nare je nadgradila Beneško listino s tem, da je eksplicitno izpostavila avtentičnost kot bistveni določujoči dejavnik vsakega vrednotenja dediščine. Razumevanje avtentičnosti naj ima temeljno vlogo v vseh znanstvenih študijah o kulturni dediščini (točka 10). Spoštovanje kulturne in dediščinske raznolikosti zahteva zavestno izogibanje vsiljenim rutiniranim obrazcem ali standardiziranim postopkom pri razlaganju ali določanju avtentičnosti posameznih spomenikov ali spomeniških območij (Doktrina II, 2014: 65–69). Listina iz Burre poudarja, da prostori kulturnega pomena odsevajo raznolikost naše družbe, nam govorijo, kdo smo, in nam dajejo informacije o preteklosti, ki nas je oblikovala. So nenadomestljivi in neprecenljivi. Listina iz Burre spodbuja preudaren način spreminjanja: narediti le, kolikor je nujno potrebno v skrbi za prostor kulturne dediščine in njegovo uporabnost, ter ga kar najmanj spremeniti, da se ohrani njegov kulturni pomen.

Leta 1997 je ob 75-letnici ustanovitve Slovenskega umetnostnozgodovinskega društva nastala publikacija *Umetnostna zgodovina in spomeniško varstvo*, v kateri so tedaj vidni predstavniki umetnostne zgodovine in konservatorstva predstavili pomembna strokovna izhodišča za nadaljnji razvoj konservatorske stroke. Nace Šumi v pregledu razvoja konservatorstva na Slovenskem izpostavlja obravnavano dilemo kot eno izmed največjih v konservatorski stroki ter poudarja, da smo se tako navadili hkratnega gledanja in uživanja sestavin različnih slogov in obdobij na spomeniku, da se ne zavedamo več, da gre za nove konservatorske stvaritve, ki jih v posameznih časovnih epizodah posameznega spomenika sploh ni bilo (Šumi, 1997: 29–30). V isti publikaciji je tudi članek Ivana Stoparja, ki je na podlagi različnih konservatorskih pristopov, ki so se zvrstili v različnih časovnih obdobjih, skušal predstaviti ustrezne in manj ustrezne končne prezentacije (Stopar, 1997: 43–48). Najprej je predstavil Steletovo odločitev iz leta 1920 o načinu prezentacije kostanjeviške cerkve, ki sta jo kasneje, leta 1957, povzela in nadaljevala tudi Ivan Komelj in arhitektka Milka Čanak. Med deli so namreč naleteli na številne do takrat neznane arhitekturne elemente iz prve polovice 13. stoletja, ki jih je barokizacija kasneje zakrila. V osnovi je bil Steletov cilj predstaviti romanske elemente na način, ki naj ne bi posegal v integriteto mlajše barokizacije, hkrati pa naj bi bili tudi ti starejši elementi predstavljeni na način, ki bi bil dovolj poveden, da bi slehernik zmogel prepoznati ostanke romanske predhodnice. Na prvi pogled enak pristop, pa vendar z drugačnim končnim prezentacijskim izplenom, je imel po Stoparjevem mnenju Železnik pri obnovi fasade cerkve stiškega samostana. Tudi ta cerkev je v 17. stoletju doživela barokizacijo, ki je zakrila mnoge sledi preteklih obdobij. Milan Železnik je pri tej obnovi oz. prezentaciji izhajal iz spoznanj, ki jih je pridobil predvsem pri obnovi Homanove hiše v Škofji Loki (slika 1); želel je nazorno ohraniti in prezentirati vse najdene starejše sledi. Po obnovi je cerkev tako ob svoji baročni notranjščini dobila povsem »novo« zunanjost. Na ta način je konservator sicer želel kar najbolje predstaviti obe poglavitni fazi stavbnega razvoja cerkve, hkrati pa je ustvaril podobo, ki je nikoli ni bilo. Stopar sicer ni želel kritično ocenjevati dela konservatorjev, temveč poudariti, da ni več mogoč in moralno opravičljiv noben resen poseg na kulturnem spomeniku, ki ne temelji na trdnih, strokovno preverjenih analizah in izhodiščih ter viziji, kakšen naj bo spomenik po končani obnovi, pri čemer ostaja neizpodbitno, da noben poseg ne sme prizadeti historične substance spomenika in okrniti njegove povednosti. In drugič, noben konservatorski poseg, naj bo še tako korekten in strokovno utemeljen, ni upravičen, če o njem ne obstaja jasno razvidno poročilo oz. dokumentacija (Stopar, 1997: 46–48).

Leta 2004 je v sklopu Dnevov evropske kulturne dediščine izšla publikacija z naslovom *Vračanje izvirnih podob – Restavratorski posegi*. Članke o razvoju restavratorske stroke in konservatorskih akcijah so prispevali konservatorji-restavratorji in arhitekti konservatorji-restavratorji Restavratorskega centra. Obdobje po letu 2000 je v primerjavi s preteklimi desetletji čas skokovitega napredka restavratorske stroke, tako na področju materialov in tehnik kakor tudi na področju pristopa in načina dela. V poglavju o avtentičnosti izvemo, da je avtentičnost stavbne dediščine eno od prednostnih načel, ki ga moramo upoštevati, ko razmišljamo o posegu, zato mora biti vsak nameravan poseg najprej ocenjen v tem smislu. Vsak novo vgrajen material in sodobna tehnologija s seboj neizogibno prinašata posledice in vplivata na obstoj originala, zato je nujen razmislek o združljivosti novega s starim (DEKD, Vračanje izvirnih podob – Restavratorski posegi, 2004: 40–41).

Pristopi k prezentaciji in interpretaciji fasad

Slovenska konservatorska stroka je torej že od Steleta in Beneške listine naprej usmerjena v odkrivanje in prezentacijo posameznih gradbenih faz, kar je bilo najprej povezano s povojno obnovo poškodovanih spomenikov, kasneje pa je to postal klasičen konservatorski *modus operandi*, ki je tako nujno povezan z vsaj delnim odstranjevanjem materialnih dokazov. Z ustanovitvijo spomeniške službe se je postopoma razvila premisa, da je konservatorska raziskava in obnova zadnje strokovno dejanje v t. i. življenju spomenika. Od tod suvereno odstranjevanje ometov in drugih gradbenih materialov s spomenika in njihovo nadomeščanje z novimi. Rezultat tega razmišljanja je tudi prezentacija najdenih ostankov preteklih gradbenih faz. V zadnjem času je dokumentacija, ki pri tem nastaja, vse bolj natančna in izpopolnjena, vendar pa nikoli ni in ne bo enakovredno nadomestilo za odstranjeno originalno materialno substanco. Konservatorji so se tega bolj ali manj zavedali ves čas, zato danes poskušamo v čim večjem obsegu ohraniti čim več originalnega gradiva na objektu. Raziskave (sondiranja) so danes še vedno povezane z direktnim poseganjem v objekt in njegove zgodovinske plasti. Sedanja praksa ima ob ustrezni dokumentaciji, ki jo največkrat izdelajo konservatorji in konservatorji-restavratorji, na voljo več načinov prezentacije.

Na Gorenjskem je bila v času med 16. in 18. stoletjem še posebej močna tradicija slikanih fasad, ki se ni uveljavila samo v mestnih jedrih, ampak tudi v trških in vaških, zato je bilo najdb s tega področja vedno veliko. Primer večslojne prezentacije je bila obnova fasade Pavšlarjeve hiše v Kranju (slika 2), kjer je bila tradicija slikanih šivanih vogalov tako močno razvita, da je bilo mogoče vsako stopnjo razvoja hiše poudariti z drugim tipom šivanega vogala. Na glavni fasadi so rekonstruirani trije tipi šivanih vogalov. Takšnih prezentacij je v gorenjskih mestnih jedrih še več, najbogatejše so prav na fasadah najimenitnejših hiš. Po datacijah teh prenov večina sodi v sedemdeseta in osemdeseta leta 20. stoletja, ko so konservatorji poenoteno sprejeli tip večslojne prezentacije glede na estetsko komponento celote. Zaradi estetskega učinka take prezentacije lahko naletimo na npr. prezentirane mlajše šivane vogale, ki so poudarjeni zgolj s črto, da ne bi motili starejše podobe prezentacije; tak primer je fasada Mitnice v Kranju (slika 3). Ali pa so mlajši šivani vogali rekonstruirani na vogalu s stransko fasado; tako prezentacijo srečamo na fasadi Šivčeve hiše v Radovljici (sliki 4, 5). Pri prezentacijah iz tega obdobja govorimo skorajda vedno o rekonstrukcijah, saj se je ohranilo malo detajlov z originalno poslikavo. Te obnove so velikokrat potekale v časovni stiski, brez vnaprej oz. sproti izdelane dokumentacije, na podlagi katere bi zmogli danes ovrednotiti vsak poseg posebej in odločitev zanj. Še posebej to velja za poročila o sondiranju, izmere in vrednotenje najdb. Pogostokrat je članek konservatorja edino ohranjeno gradivo.

Prezentacija arhitekturnega razvoja objekta in razvoja likovne podobe fasade

Ta način prezentacije je pogosta izbira predvsem pri obnovah fasad pomembnejših in večjih objektov, saj so bili ti v lasti predstavnikov najbogatejših slojev družbe in zato večkrat predmet obsežnih in kvalitetnih predelav. Odgovor na

vprašanje, komu je namenjena takšna prezentacija, je verjetno najširši javnosti, ki naj fasado bere kot odprto knjigo stavbnega razvoja objekta (Železnik, 1981: 65–66). Poudariti velja, da ta tip prezentacije poleg prikaza arhitekturnega in likovnega razvoja objekta/fasade v sebi nosi močno sporočilno vlogo, ki je neposredno povezana s prezentacijo in ustvarjalnostjo konservatorskega dela ter poudarjanjem pomena varstva in ohranjanja dediščine. Pogostokrat so tudi investitorji v napetem pričakovanju, kaj se bo odkrilo in kakšna bo »nova« podoba prenovljenega objekta.

Ta tip prezentacije moramo ločiti na dva podtipa, in sicer na prikaz arhitekturnega razvoja objekta in prikaz razvoja likovne podobe fasade. V sklop prezentacije arhitekturnega razvoja objekta sodijo odkriti in prezentirani posamezni elementi, ki nakazujejo prvotne gabarite in oblikovanje objekta (zazidane odprtine, konzolno nadstropje ipd.). V sklop prezentacije razvoja likovne podobe fasade pa sodijo vsi likovni elementi fasade (naslikani šivani vogali, slikana polja, obrobe napuščev, stenske poslikave ...). Prav likovni elementi so največkrat predmet restavracije in rekonstrukcije. Zaradi stanja ometa fasade kot njihovega nosilca jih je velikokrat težko obvarovati v odkritem obsegu ter prezentirati njihovo avtentično stanje in podobo. V takih primerih smo prisiljeni v snemanja, rekonstrukcije. V najboljšem primeru jih ohranimo, dokumentiramo in ponovno zakrijemo.

Ta tip prezentacije je kvaliteten le, če so odkrite najdbe edinstvene in predstavljene tako, da ne posegajo v integriteto najmlajše prezentirane podobe. Taka prezentacija je uspešnejša, če starejšo podobo objekta združeno poudarjata tako prezentacija arhitekturnega razvoja objekta kot ponovno odkrita likovna podoba. Tudi prikaz zgolj arhitekturnega razvoja objekta ni tako moteč, kot je recimo razdrobljen prikaz vseh najmanjših arhitekturnih in likovnih detajlov, ne oziraje se na njihovo dojemanje in končno podobo fasade. Ne glede na ves trud, ki je vložen v tako prezentacijo, je treba poudariti, da z njo ustvarjamo podobo fasade, ki je nikoli ni bilo, in s tem spreminjamo objekt v nosilec muzejske predstavitve razvoja objekta. Predstavljam obnove fasad najpomembnejših meščanskih objektov, ki so celostno prenovo doživeli med letoma 1970 in 2000. Predstavljeni primeri so postali modus operandi tudi za mlajše obnove in prezentacije fasad. Podoben t. i. muzejski pristop k prezentaciji je še danes vsesplošno aktualen, ni pa še doživel poglobljene analize o smotrnosti in ustreznosti. To je po moji ocena nujna naloga sodobne konservatorske stroke.

Na fasadi Mitničarske hiše (slika 3) v Kranju gre za prezentacijo najstarejše faze iz 16. stoletja s konzolnim nadstropjem in šivanimi vogali v prvem nadstropju v kombinaciji z detajli mlajših faz v drugem nadstropju, saj je bila hiša domnevno v 18. stoletju nadzidana. Da bi drugo nadstropje kar najmanj vplivalo na prezentacijo prvega, so šivane vogale in še mlajše naslikane pilastre iz prve polovice 19. stoletja prikazali črtno. Črtno izrisani likovni elementi v drugem nadstropju niso samo rekonstrukcija, ampak popoln konstrukt, saj so bili originalno barvani. Naslikan okvir portala v rdečem tonu je iz leta 1809, kakor kaže letnica, najdena na temenu naslikanega portala. V pritličju torej nimamo prezentirane enotne podobe 16. stoletja, ampak tudi njeno likovno nadgradnjo. Predstavljena prezentacija je sicer likovno izjemno bogata, v bistvu pa gre za izjemno težko berljiv konstrukt.

Homanova hiša v Škofji Loki (slika 1) je ena najimenitnejših hiš na Mestnem trgu že od samega oblikovanja trga. Predstavljen stavbni razvoj na fasadi je zaradi množice prezentiranih detajlov še težje berljiv kot pri kranjski Mitnici. Najlažje se branja fasade lotimo, če beremo faze arhitekturnega razvoja objekta. Sprva je bila hiša ožja in nižja. Najstarejšo fazo predstavljajo gotska okna v nadstropju in šivani vogali skrajno levo v zlato oker barvi. Hiša je bila po potresu leta 1511 razširjena proti trgu. Iz tega obdobja je tudi vogalni pomol s kranjskim grbom in letnico 1529. Freski s sv. Krištofom in vojakom sta iz 16. stoletja in nista nastali istočasno. Naslednja faza je z začetka 17. stoletja, vanjo pa uvrščamo črno-bele okenske okvirje in slikan friz pod takratnim napuščem, saj je bila hiša takrat še vedno enonadstropna. Objekt so nadzidali v 18. stoletju. Iz tega obdobja so tudi novi kamniti okenski okvirji. Odstranili so stara renesančna okna na konzolnem pomolu in jih nadomestili z novimi ter na ta način poskušali poenotiti podobo. Pasovne linije šivanih vogalov na pomolu so rezultat obnove v 19. stoletju. Prav tako tudi znameniti Groharjev balkon.

Hiša na Linhartovem trgu 25 (slika 6) v Radovljici je ena najstarejših hiš na trgu. Na desni strani fasade so prezentirani šivani vogali pred širitvijo konzolnega nadstropja najverjetneje v poznem 16. stoletju. Hiša je dvoosna, kar priča o njeni visoki starosti. Med to in sosedovo hišo je bil nekdaj ozek prehod, ki so ga ob širitvi zazidali.

Pri prezentaciji posameznih elementov starejših faz zlahka pride do prej omenjene hibridne podobe objekta in konfuznosti pri razumevanju predstavljenih elementov na fasadi. Kljub temu menim, da ta možnost prezentacije vendarle mora obstajati, vendar ne sme bistveno okrniti enovitosti predstavljene podobe fasade. Izjemne najdbe (ne vse!) naj bodo predstavljene na način, ki ne bo posegal v integriteto mlajše podobe fasade, oz. tako, da predstavitev gledalca ne bo zmedla na način, da ne bo vedel, kaj kam sodi, oz. da bo fasado zaradi množice elementov dojemal kot enovito, saj ne bo mogel ločiti mlajših posegov od starejših sledi. Če smo na robu fasade našli starejše šivane vogale, jih lahko v nekem obsegu restavriramo in predstavimo, nikakor pa ne bi bilo primerno na podlagi najdenih indicev/detajlov iz več obdobij izvesti večslojne rekonstrukcije, saj takšna predstavitev ne bi imela strokovne vrednosti v smislu varstva avtentičnih najdb »in situ«, hkrati pa bi opazovalca zmedli s predstavljenimi podatki, iztrganimi iz konteksta. Pri fasadah, kakršna je na Homanovi hiši, bi zato morali pred odločitvijo o prezentaciji izvesti načrt rekonstrukcije stavbnega in likovnega razvoja fasade ter vanj po fazah vrisati vse likovne najdbe na fasadi in ne zgolj arhitekturnega razvoja. Tako bi določili obseg predstavitve, ki bi bila še dovolj kvalitetna in razumljiva. Če to ni mogoče, je vsakršna prezentacija že vnaprej obsojena na nepravilno dojemanje in je zgolj nabirka najdenih/rekonstruiranih elementov.

Prezentacija načina gradnje

Ta tip prezentacije se je glede na arhivske podatke ZVKDS, OE Kranj, intenzivneje začel pojavljati konec osemdesetih let 20. stoletja. Gre za predstavitev načina gradnje, kar največkrat nima nič skupnega s prvotno podobo objekta niti z nobeno drugo vmesno razvojno fazo objekta. V bistvu gre za prezentacijo strokovnega navdušenja nad zidavo. Takih primerov je sicer manj v meščanski arhitekturi, več pa jih je v sakralni.

Navdušenje nad kamnito ali opečnato grajeno steno se je postopoma preselilo tudi v notranjost objektov. Eden prvih, ki so pri nas uveljavili odstranjevanje ometa, je bil arhitekt Jože Plečnik. Znamenite so njegove t. i. slečene stene z izstopajočimi fugami, kot moderna interpretacija stene. Tudi danes želijo mnogi investitorji v notranjosti prezentirati del kamnite stene ali iz opeke grajen obok. S tako prezentacijo v nobeni modificirani obliki ne soglašamo več, saj pomeni strokovno neargumentiran odklon od originalne podobe objekta.

Odstranitev najmlajše faze in restavracija oz. rekonstrukcija najstarejše podobe fasade

Ta tip prezentacije je strokovno najzahtevnejši in najodgovornejši, hkrati pa je odvisen tudi od same najdbe. Če bi izsledki sond pokazali, da so spodaj ključni arhitekturni elementi starejše zasnove, bi jih bilo treba najprej natančno dokumentirati in vnesti v arhitekturne izmere obstoječega stanja. V takih primerih je po navadi ustanovljena delovna skupina več strokovnjakov, ki poskušajo poseg interdisciplinarno ovrednotiti in pretehtati izgubo obstoječe najmlajše fasade ter možnosti rekonstrukcije in restavracije najdb. Načeloma je takšna prezentacija primerna, kadar je obstoječa podoba fasade manj kvalitetna, najdbe pod njo pa so izjemnega pomena za arhitekturni razvoj objekta in zgodovinsko pričevalnost okolja, v katerem stoji objekt. Najobsežnejši primer take prezentacije na Gorenjskem je Šivčeva hiša v Radovljici (sliki 4, 5). V poznem 19. stoletju so v duhu vsesplošnih prenov fasad zazidali konzolno nadstropje in celotno fasado ravninsko poenotili. K sreči so ohranili večino arhitekturnih in slikanih prvin 16. in 17. stoletja. Ko so restavratorji začeli sondirati fasado, so naleteli na zazidane konzole. Po delni odstranitvi se je komisija (Olga Zupan, Peter Fister in Cene Avguštin) odločila, da je treba zidavo iz 19. stoletja v celoti odstraniti ter rekonstruirati starejšo podobo fasade in zasnovo objekta. Pomembno vlogo pri tej odločitvi sta odigrala tudi ohranjena renesančna tlorisna zasnova objekta in namen Občine Radovljice, da hišo nameni muzejski dejavnosti. Kljub vsemu pa se člani komisije niso mogli upreti prezentaciji arhitekturnega razvoja objekta in njegove likovne podobe. Tako imamo na rekonstruirani podobi fasade objekta iz 16. stoletja (konzolno nadstropje) poslikavo dveh vrst šivanih vogalov (domnevno 16., 17. stoletje), rekonstruirano stensko poslikavo iz predvidoma 17. stoletja, rekonstruirane okenske okvirje in portal, ki je zaradi zagotavljanja dodatne statične podpore konzolnemu nadstropju nameščen izven nivoja fasade. Šivčeva hiša je primer skrbno načrtovane rekonstrukcije, ki se kljub velikim strokovnim naporom in interdisciplinarnemu sodelovanju ni mogla docela uresničiti. Zaradi številnih gradbenih vzrokov in možnosti je prišlo pri obnovi fasade do več kompromisov na škodo končne podobe, kar pod vprašaj postavlja smoter tako obsežne rekonstrukcije.

Če povzamemo, je fasada avtentičnost ohranila predvsem v prezentaciji konzolnega nadstropja. K splošnemu vtisu pa prispevajo predvsem rekonstrukcije. Omet je bil na fasadi v celoti zamenjan, vendar žal nimamo ne o njem in ne o poslikavah nobene podrobnejše dokumentacije. Če bi restavrirali najdbe in jih po potrebi retuširali, bi bila prezentacija kvalitetnejša. Prav tako bi bilo morda primernejše, da bi poiskali ustreznejšo statično rešitev kot to, da je glavni portal prevzel vlogo statične podpore konzolnega nadstropja. Prestavitev portala z dvoriščnega prizidka se zdi ustrezna. Okenski okvirji so iz fino obdelanega betona in so povsem nov in sodoben prispevek k prezentaciji objekta. Pri prezentaciji originalne podobe fasade ni težava v predstavljanju najdb, težava se pojavi, ko o celostni rešitvi prezentacije začnejo odločati nujni gradbeni posegi, statika, zakonitosti materiala ipd. Takrat smo nemalokrat prisiljeni v kompromisne rešitve, ki gredo največkrat na račun varstva, strokovno korektne obnove in ustrezne prezentacije. Prav tako je fasada izgubila večino avtentičnih materialnih vrednosti, ki so predpogoj za vsakršno novo raziskovanje objekta.

Prezentacija najmlajše podobe ne glede na kvaliteto najdb

Vzrok za tovrstno prezentacijo navadno ni konservatorjeva odločitev, ampak pomanjkanje sredstev ali preprosto odločitev investitorja. Najdbe se potem zgolj dokumentirajo in v najboljšem primeru ponovno zakrijejo. V mestnih jedrih na Gorenjskem takega primera ni, zato predstavljam hišo v Cerkljah na Krvavški cesti 1, ki je razglašena za kulturni spomenik lokalnega pomena (sliki 7, 8). Konservatorka se je z delovno skupino in na pobudo župana odločila za prezentacijo najmlajše neoklasicistične fasade iz 19. stoletja. Ob sondiranju sta bili na glavni fasadi najdeni baročni freski sv. Florijana in Križanja z letnico 1787, ki sta bili pred

procesom obnove sneti in deponirani. Najdeni so bili tudi vrezani baročni šivani vogali, mlajši pravokotni šivani vogali, sledi osnovnega objekta, kasnejših širitev in zvišanja objekta ter baročni okenski okvirji iz tufa. Objekt ni doživel restavracije najdb in starega originalnega ometa ter prezentacije v smislu prikaza stavbnega razvoja objekta, ampak skorajda popolno rekonstrukcijo najmlajše zasnove fasade, ki ne da niti slutiti svoje bogate stavbne zgodovine (slike 7, 8, 9). Glede na to, da je fasada iz 19. stoletja na objektu manj kvalitetna kot najdbe in je bila starejša baročna fasada skorajda intaktno ohranjena, bi se morda v tem primeru vendarle morali odločiti za prezentacijo starejše podobe, saj bi bila ta povsem razumljiva, celovita in ne bi bistveno okrnila preprosto oblikovane mlajše fasade.
V ta sklop delno sodi tudi obnova glavne fasade na Mallyjevi hiši v Tržiču (slika 10), kjer se raziskav glavne fasade zaradi bogate klasicistične fasade sploh nismo lotili. Klasicistično fasado, ki je predvidoma nastala po požaru leta 1811, smo zgolj obnovili v originalni barvni podobi.
Ta tip prezentacije je najkvalitetnejši takrat, ko nam pod prezentirano najmlajšo plastjo uspe ohraniti večji del materialne avtentičnosti. Odločitev za mlajši tip prezentacije je smiselna tudi takrat, ko z najmlajšo likovno podobo fasade sovpadajo okenske odprtine, portal, tlorisna zasnova in stopnja ohranjenosti notranjosti ..., kar pomeni, da je bila zadnja predelava temeljita in obsežnejša tudi v notranjosti. Če so omet in vse barvne plasti dobro sprijeti s podlago, je odločitev za ta tip prezentacije edina prava, saj bo morda v prihodnosti mogoče razkrivati barvne plasti in plasti ometov z metodami, ki ne bodo zahtevale popolne destrukcije mlajših plasti.

Predlagani cilji

Za izboljšanje metodologije obnove in prezentacije fasad je treba najprej ponovno ovrednotiti vrednosti kulturne dediščine, ki jih želimo ohraniti in ustrezno zaščititi. Janez Mikuž jih je opredelil kot pojavno, vsebinsko, materialno, tehnično in zgodovinsko (Mikuž, 1997: 51). Pojavna vrednost dediščine je percepcijsko najlažje razumljiva. Gre za vtis, ki ga pušča spomenik. S pojavno vrednostjo dediščine danes sovpada aktualna obnova, v sklopu katere ima velikokrat prednost gradbenotehnična obnova, zaključi pa se s prezentacijo izbranih kosov, kot so npr. leseni tramovi, deli kamnitega ali opečnatega ostenja, kamniti okenski okvirji, portali ipd. Gre za sodoben populističen pristop k obnovi, kjer se ob minimalnih standardih konservacije objekta izvajajo posegi, ki so zgolj prilagojene rešitve sodobne gradnje. Sem sodijo tudi popolne rekonstrukcije, pri katerih se kamnito ostenje nadomesti z opečnatim, nanj pa se na fasadnem sloju rekonstruirajo dekorativni elementi fasade, ki so lahko sicer čisto korekten umetniški izdelek, vendar se tako za vedno izgubijo dragocene materialne vrednosti.
Vsebinski pomen dediščine je najbolj abstrakten del spomenika. Nepoznavanje tega segmenta pripelje do marsikaterega nesporazuma glede namembnosti. V meščanskih hišah imajo posebno vrednost in namembnost pritličja, ki so bila v večini primerov namenjena trgovski ali obrtniški dejavnosti. Po selitvi dejavnosti na obrobja mest so zdaj ta prazna. Marsikdo bi jih želel spremeniti v dodatne stanovanjske površine, pri tem pa pride do marsikaterih arhitekturnih in gradbenih težav.
Pomen materialov oz. substance je tisti segment spomenika, ki izginja najhitreje. S tem se izgubljata avtentičnost in zgodovinska pričevalnost spomenika, saj so v ohranjeni substanci številna sporočila o starih tehnikah in tehnologiji, materialih, konstrukcijskih rešitvah itd. Poznavanje teh podatkov nam govori o času, v katerem je spomenik nastal, o njegovih graditeljih, naročnikih ... Na podlagi varstva tega segmenta lahko spomenik sploh raziskujemo. Konservatorji bodo v prihodnosti morda razpolagali z metodami, ki bodo kompleksnejše, manj invazivne, zato je varovanje originalne substance materialov ključnega pomena za varstvo kulturne dediščine. Zgodovinski pomen dediščine se nanaša na raziskave in informacije o nastanku in pomenu dediščine, kar dolgoročno krepi našo skupno identiteto.
Ustrezno varovane fasade zato ne determinira zgolj pravilno izbran omet ali ohranjen detajl poslikave, ampak čim bolj celostno ohranjanje avtentičnosti vseh sestavin. Ker je večina kulturnih spomenikov doživela več sekundarnih predelav, je naloga konservatorske stroke, da loči originalne sestavine spomenika od sekundarnih sledi časa, ki sicer lahko zmanjšujejo ali povečujejo vrednost spomenika, ter predpiše obseg, način in kvaliteto posegov, ki na eni strani pomenijo podaljšanje življenjske dobe spomenika, na drugi strani pa ohranjanje vseh njegovih prepoznanih in varovanih sestavin. Te sem razdelila v štiri glavne skupine. Pri tem sem se delno naslonila na Fistrov Glosar arhitekturne tipologije, v katerem so arhitekturni členi razdeljeni v tri sklope: dele stavbe, odprtine in okrasne arhitekturne člene (Fister, 1993: 55).
Naštete sestavine enakovredno sestavljajo varovano podobo fasade in posledično objekta ter nudijo poleg raziskave in analize arhivskih virov osnovne informacije o objektu. Varovane sestavine fasade sem razvrstila po vrsti od vzroka nastanka, ki je ustvaril samo fizično materijo spomenika, do filigransko natančnih detajlov razmerij, ki sicer niso ključni v gradbenotehničnem smislu, so pa tisti, na katerih sloni končna ocena kvalitete in dediščinske vrednosti nepremičnega spomenika. Omenjena razvrstitev predstavlja hkrati tudi stopnjo varovanja z vidika povprečnega uporabnika oz. investitorja, pri čemer je varovanje funkcije in uporabnosti primarnega pomena, varovanje razmerij pa je, splošno gledano, manj pomembno oz. skorajda zanemarljivo.[4]

4 Zaradi izbrane teme se osredotočam zgolj na sestavine fasade, čeprav bi jih lahko z manjšimi modifikacijami aplicirali tudi na celoten objekt.

Varovane sestavine fasade:

FUNKCIJA IN UPORABNOST		
OBLIKOVANJE	2.1 Arhitekturni elementi/deli fasade	2.1.1 Streha z napuščem 2.1.2 Fasada 2.1.3 Odprtine (okenski okvirji, portal ...) 2.1.4 Izzidki, niše ... 2.1.5 Talni zidec
	2.2 Dekorativni elementi fasade	2.2.1 Stensko slikarstvo 2.2.2 Fasadni elementi 2.2.3 Arhitekturna plastika 2.2.4 Dekorativna obdelava ometa
	2.3 Stavbno pohištvo	2.3.1 Okna 2.3.2 Vrata 2.3.3 Polkna 2.3.4 Ograja ...
MATERIALI	3.1 Apno	3.1.1 Apnena malta 3.1.2 Apneni omet 3.1.3 Ostala veziva
	3.2 Kamen	
	3.3 Les	
	3.4 Kovina	
	3.5 Opeka	
	3.6 Sodobni materiali	
RAZMERJA	4.1 Širina : višina : globina	
	4.2 Zidano : prevotljeno	
	4.3 Plastična razgibanost : ravnina stene	
	4.4 Barva : belina	

Vrednost fasade je torej kompleksen preplet številnih dejavnikov. Nepremični kulturni spomenik, katerega del je tudi fasada, je materialna ostalina časa in prostora. S svojim okoljem komunicira večplastno, in sicer glede na pojavno obliko, vsebino, substanco in zgodovino.
Obnova fasade je torej visoko strokoven in kompleksen proces z jasnimi strokovnimi izhodišči, ki ga sicer ne smemo ločiti od raziskav, varstva in obnove celotnega objekta, vendar je v praksi marsikdaj poseg ločen od celostne obnove objekta. Vsaka obnova se začne s predhodnimi pripravami in raziskavami, zaradi katerih je obnova strokovno utemeljena, lažja, prezentacija pa kvalitetnejša. Obnova zajema več faz obdelave: evidentiranje, umetnostnozgodovinsko analizo/topografijo, vrednotenje oz. valorizacijo celotnega objekta, raziskave materialov, začetno in sprotno dokumentiranje raziskav in postopkov obnove. Vsi ti podatki so glede na izdane kulturnovarstvene pogoje ZVKDS del analitičnega dela konservatorskega načrta, ki mora biti izdelan v skladu s Pravilnikom o konservatorskem načrtu (Uradni list RS, št. 66/09; Kovač, 2004: 170–178).

Največja prednost in hkrati težava sodobnega konservatorstva je vnos sodobnih materialov. Ti lahko po eni strani objekt rešijo pred gotovim propadom, ga učinkovito estetsko poudarijo, po drugi strani pa mu lahko zaradi nepravilnega dojemanja varovanih sestavin odvzamejo vse tiste vrednosti, zaradi katerih smo neki objekt prepoznali za kulturni spomenik. Če uporabljamo nove sodobne rešitve in materiale pri gradbenotehničnih težavah (statične rešitve, rešitve težav s kapilarno vlago, zamakanjem itd.), lahko objekt še vedno ohrani prej omenjene varovane sestavine. Ko začnemo s sodobnimi materiali posegati direktno v varovane sestavine, jih vrednotiti zgolj skozi funkcijo in jih zato nadomeščati s sodobnimi rešitvami, začnemo kulturnemu spomeniku jemati prej omenjene spomeniške kvalitete.

Najmanj spoštovana in težko sprejeta varovana sestavina med investitorji so razmerja. Ta so bila nekdaj skrbno premišljena in z upoštevanjem klasičnih proporcev in razmerij zasnovana v harmonično celoto. Klasična arhitekturna kompozicija objekta se kaže v razmeroma enostavnih razmerjih, ki so se jih držali pri oblikovanju stavbne mase v razmerju do strehe in potem naprej vse do najmanjših elementov, ki členijo fasado (Deu, 2004: 144). Povojno obdobje funkcionalizma v najrazličnejših variacijah je celovito obnovo spremenilo v tehnično sanacijo, katere glavni in edini cilj je odprava posameznih gradbenotehničnih težav, ki tarejo lastnika. Obnova kulturne dediščine pa ni samo to, saj gre vedno za poseganje v občutljivo harmonijo zgodovinske celote, ki ima ne nazadnje tudi duhovno dimenzijo. Stavbno pohištvo je ena izmed varovanih sestavin, ki je najbolj na udaru in zato večna konservatorska tema. Varovano je v funkciji, oblikovanju (tip, vrsta, oblika okna, vrat, način obdelave ...), materialu (les, kovina ...), barvi in razmerjih (širina in debelina letvic proti zastekljeni površini, širina okenskega okvirja proti okenski odprtini, razmerja oken proti celotni fasadi ...). Osnovna funkcija oken in vrat je seveda pridobiti svetlobo v notranje prostore, jih prezračiti, zaščititi, skozi okna pogledati ven in skozi vrata priti noter. Tej funkcionalni rabi se že od antike naprej pridružuje tudi njihova estetska vloga. Gre za pogled od zunaj, za pogled na celoto. Naše najstarejše ohranjene hiše v mestnih jedrih sodijo v 15. oz. 16. stoletje. Za razliko od vrat se v vseh petih gorenjskih mestih ni ohranilo nobeno originalno okensko krilo iz tega obdobja. Ohranjena pa so okna iz 18. ali 19. stoletja. Ker sta povprečnemu sodobnemu lastniku največkrat pomembna predvsem toplotni izpust in varčevanje pri stroških ogrevanja, želi stara okna nadomestiti z novimi termopanskimi. Ta seveda zaradi tehničnih pogojev, ki jih zahteva izvedba termopana, ne morejo biti enakih dimenzij kot stara in tudi oblikovana so drugače. Letvice in okenski okvirji so širši, zato prihaja do raznih neustreznih rešitev, kot so nalepljene oz. zasilikonirane letvice na okenska stekla ipd. V najboljšem primeru se zato ohrani staro zunanje dvokrilno okno, znotraj pa namesti novo termopansko okno.

Pri izboru materialov je treba dobro poznati materiale, ki so bili uporabljeni pri oblikovanju fasade, in vzroke poškodb. Ti so različni, največkrat so to vremenski vplivi, biološki vplivi (zajedavci, plesen, vlaga ...) ali pa napake in uporaba neustreznih materialov pri starejših sanacijah. Najboljši pristop k obnovi je uporaba enakih materialov (vsaj v osnovi) kot pri originalu in preventivna odprava vzrokov poškodb. Prva izbira pri obnovi fasade je vsekakor apneni omet oz. omet na osnovi apna. Vsi ostali industrijski ometi, ki jih oglašujejo kot paropropustne, so vedno le bolj ali manj dober približek apnenim. Silikatni in silikonski ometi se v mestnih jedrih še vedno uporabljajo, zaradi česar fasade delujejo plastično, ulito in brez napak, kot da bi bile hiše na novo zgrajene (Deu, 2004). Tudi pri izboru barv je treba upoštevati, da so bile vse hiše do 20. stoletja barvane z apneno barvo, ki je bila pigmentirana z mineralnimi pigmenti. Sodobne barve so kljub paropropustnosti sintetične, zato delujejo umetno, barvni odtenki pa niso več taki, kot so bili originalni. Tako kar naenkrat dobimo objekt, ki je sicer obnovljen, vendar se nam zdi nekako tuj in deluje kot na novo zgrajen, kar je rezultat uporabe napačnih materialov in tehnik.

Obnova fasade poteka največkrat ločeno od celostne obnove objekta. Glavni vzrok za to je izpostavljenost fasade, zaradi katere jo je treba pogosteje obnavljati kot notranje prostore ali streho. Kljub temu jo moramo obravnavati kot neločljivi del zaščitene celote. Večina fasad je bila od obdobja razglasitev za spomenik v osemdesetih letih 20. stoletja vsaj enkrat obnovljena. Ker je bil to čas pogostega snemanja celotnih plasti ometa, ima danes le malokatera fasada še ohranjene historične plasti. Največkrat se zato srečujemo z nekaj desetletij starimi fasadami. Dokumentacija, ki je nastajala takrat, je marsikje pomanjkljiva ali pa je zaradi mnogoterih razlogov sploh ni, zato se pregleda in raziskave fasade lotimo tako, kot bi se ju lotili prvič. Ob vogalih in pod napuščem iščemo ostanke starih ometov, da bi lahko kar najbolj korektno izdelati dokumentacijo, ki je potem osnova za nadaljnje posege.

Pri obnovi varovanih sestavin fasade si je treba prizadevati za spoznanje, da tu ne gre zgolj za gradbeno obnovo, v sklopu katere želimo izboljšati estetsko podobo fasade in njeno energetsko učinkovitost, temveč za celostni poseg, ki bo imel neposreden učinek na obstoj celotnega spomenika. Pri funkciji in uporabnosti je treba sprejeti dejstvo, da kamnito grajena meščanska hiša iz 16. stoletja ne more in ne sme postati npr. sodobna nizko pasivna hiša. Prav tako v stari hiši ne moremo izvajati obnove in posegov, ki bi kakorkoli prizadeli kamnito strukturo ostenja oz. imeli nanjo negativen vpliv. Odstranjevanje dekorativnih elementov fasade zato, da bi slednjo prekrili s sodobnimi termoizolacijskimi materiali, je nedopustno. Stavbno pohištvo moramo ohranjati in obnavljati čim dlje, potem pa ga na podlagi natančno izrisane dokumentacije nadomestiti z ustreznimi kopijami, ne zgolj približki, ki so trenutno na voljo.

Naloga konservatorja je, da pred posegi v kulturno dediščino prepozna varovane sestavine, hkrati pa ustrezno ovrednoti poškodbe oz. sekundarne sledi časa. Šele tako lahko določimo ustrezen način obnove in morebitne možnosti sodobne ustvarjalnosti. Če je katerakoli od varovanih sestavin dotrajana, bi jo lahko ob natančno izvedeni dokumentaciji nadomestili z novo, ki je glede na stopnjo in način varovanja natančen posnetek odstranjene in dotrajane (v oblikovanju, materialih in razmerjih), lahko pa tudi povsem nov sodoben prispevek k celoti, vendar ne na škodo varovane avtentičnosti in izpovednosti. Poleg tega bi morale biti sodobne rešitve/intervencije izdelek vrhunske arhitekture tako v izboru materialov kot v oblikovanju in načinu umeščanja v prostor. Če so potrebe po dodatnih statično gradbenih rešitvah, naj bodo te izvedene v skladu s čim večjim varovanjem osnovne substance, kompatibilne z obstoječimi materiali in izvedene tako, da bo objekt funkcioniral v skladu s potrebami in možnostmi, ki so mu bile dane ob izgradnji.

Povzetek

Varovanje avtentičnosti varovanih sestavin kulturnega spomenika je ena izmed primarnih nalog konservatorskega prizadevanja in delovanja. Pomembno je spoznanje, da spomenik ni zgolj nosilec estetike preteklega obdobja, ampak tudi tehnični oz. tehnološki dokument, zato je naloga vsakršne konservatorske obnove ohranitev materialnih ostankov, ki pričajo o uporabljeni tehnologiji. Brez ohranjenih materialnih ostankov bi kulturni spomenik ostal brez prepoznanih in ovrednotenih kvalitet, ki so ga ustvarile in na podlagi katerih ga je mogoče vsakič znova raziskovati. Postal bi nekakšen ponaredek samega sebe. Pri tem seveda ne moremo spregledati faktorja minljivosti in dejstva, da je nepremična kulturna dediščina v nenehni rabi, zato je pogostokrat predmet prenove in s tem vsakokrat v nevarnosti, da izgubi del svoje avtentične vrednosti in zgodovinske pričevalnosti. Stroka si mora zato v prvi vrsti prizadevati prav za ohranjanje materialne avtentičnosti. To dosega s klasično obnovo objekta in konservatorsko-restavratorskimi posegi, ki poskušajo obstoječe materiale utrditi, obnoviti na način, ki je kompatibilen z originalnimi materiali, hkrati pa ustvariti takšne pogoje, da bodo okoliščine za njihov propad in razkroj minimalne. Ko so vse možnosti ohranjanja materialne avtentičnosti izčrpane, konservator na podlagi natančnega dokumentiranja obstoječega stanja poda soglasje za njihovo menjavo, restavracijo oz. rekonstrukcijo. Zamenjani element oz. sestavina naj bo zato enake velikosti, oblike, materiala, razmerij, barve itd. kot originalni.

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1. Škofja Loka, Homanova hiša (foto: Maja Avguštin)
1. Škofja Loka, Homan House (photo: Maja Avguštin)

2. Kranj, Pavšlarjeva hiša (foto: Maja Avguštin)
2. Kranj, Pavšlar House (photo: Maja Avguštin)

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10. Tržič, Mallyjeva hiša (foto: Maja Avguštin)
10. Tržič, Mally House (photo: Maja Avguštin)

Maja Avguštin

Examples of presentations and related issues on the façades of burger houses

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Abstract

The preservation of material remains that, in individual cases, are the only material evidence of the development and aesthetic appearance of a given building is extremely important in the protection of cultural heritage. Integrated heritage protection allows direct access to subsequent and potentially new methods of heritage research to be maintained. All reconstructions are merely approximate copies of finds and can in no way be an equal substitute for original traces that have been removed.
In our part of the world "restoration of cultural heritage" has all too often come to mean structural renovation with restored or reconstructed details, a phenomenon that can no longer sufficiently define the complexity of heritage protection and interventions in heritage. The conclusion of this article therefore proposes that, in the case of protected cultural heritage, greater weight should be given to the conservation-restoration approach even in the renovation of walls, façades, structural elements, etc.

Introduction

Town centres today are a combination of buildings that for the most part date from a period running from the sixteenth century to the first decades of the twentieth century. Their architectural development and aesthetic appearance can be identified and observed above all on their principal frontages or façades. In the past these were the most important indicators of contemporary trends in burgher architecture, while at the same time they represent the "inside walls" of the town centre as a whole.
The façades of burgher houses are thus true palimpsests of past periods. The preservation of material remains that, in individual cases, are the only material evidence of the development and aesthetic appearance of an individual structure is therefore very important. Integrated protection of heritage maintains direct access to subsequent and potentially new methods of heritage research. All reconstructions are therefore merely approximate copies of finds and can in no way be an equal substitute for original traces that have been removed.
I mainly work in the Gorenjska region of north-western Slovenia, so the examples presented here are from this area. It is, however, possible to find similar decisions and presentation choices elsewhere. The paper focuses on different approaches to the restoration of façades and on the associated dilemmas that have arisen in the past and continue to arise today.
In the town centres of the Gorenjska region we most frequently encounter "museum-like" presentation, which collects together all finds, regardless of the phase of development of the building in question. All these presentations attempt to convey to the observer a message about the architectural development of the individual building and the aesthetic appearance of its façade. Some façades have thus become reconstructed museum-like presentations, where the building acts as the support for an exhibition on its own

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architectural development.
On the basis of the presented protected components of the façade and the different conservation-restoration approaches adopted, each individual type of presentation is analysed in terms of the quality and transparency of the presentation of finds, the protection of historical layers, the authenticity of materials and the design of the façade.

Outline of the development of the principles and methodology of façade restoration and presentation over the course of the development of the monument protection service

Art historians Georg Dehio, Alois Riegl and Max Dvořák were united by their common efforts to enforce the fundamental requirement to preserve the authenticity of monuments and consistently respect all monumental elements, regardless of their date of origin or the artistic style or importance of the monument. This is the origin of Dehio's famous dictum "*Konservieren, nicht restaurieren*" – "Conserve, don't restore" – and Dvořák's unequivocal opinion that one of the cardinal sins of an unlettered populace and the misguided efforts of experts was the attempt to "purify" monuments and reconstruct their "original state". Although Dvořák was aware that the boundary between conservation and restoration was not susceptible of a general definition, he defined historical authenticity as a central norm of heritage conservation.[1]
France Stele was the author of the fundamental texts of the conservation profession in Slovenia, works that served to train the majority of post-war conservators and in accordance with which they worked. His first work, published in 1928 under the title *Osnovna načela varstva spomenikov* ["Fundamental Principles of the Protection of Monuments Conservation"] recapitulates the principles set out by Dehio, Riegl and Dvořák, in other words the guidelines to be followed by experts and non-experts alike. Stele argues that it is important to preserve old ensembles, by which he meant both interior fixtures and town squares, groups of buildings, and so on. The seventh principle he set out was that modern materials should not be used in conjunction with old monuments. He also emphasised that items made from "non-aesthetic", substitute materials such as plaster, printed reproductions, etc., should never be used. At the same time, however, despite emphasising the importance of protection and conservation, he also admitted the possibility of reconstruction – unlike Dehio and Dvořák – although only on a scale that does not destroy or erase "the documentary value of objects" (Stele, 1928: 179–185).
In certain cases, then, Stele supports reconstruction if it is necessary to give façade a uniform appearance. In this, he deviates from Dehio's view that it is necessary to persist with conservation for as long as possible and only at the very end, after a careful study of documentation and dimensions, opt for restoration (Dehio, 1988: 97–98). In the case of a decision to reconstruct, Stele also emphasises the need for the reconstruction to be separate from the original, while at the same time forming a harmonious whole with it (Stele, 1928).
Stele's 1955 work *Estetika in dokumentarnost v restavriranju spomenikov* ["Aesthetics and Documentary Value in the Restoration of Monuments"] definitively oriented post-war conservation policy and continues to inform present-day approaches. Right at the beginning of this book, Stele highlights the tense and unresolved relationship between, on the one hand, the aesthetics of monuments, as required by life, and on the other, the strict conservation principle of "Conserve, don't restore!" He believes that for the post-war period, in which conservators are obliged to confront the consequences of the Second World War, restoration is more appropriate, since mere conservation of the existing state does not make economic sense. Conservation should only be an option if justified by extraordinary scientific and cultural value. Even then, the desire for aesthetic presentation is conditioned by a compromise that is to the detriment of documentary value. In Stele's view, the question of reconstruction is less controversial (at least in comparison to paintings and sculptures) in the case of architecture when a monument is part of an existing urban ensemble and, in the case of a decision not to reconstruct, it would be necessary to insert something new. Stele goes on to reflect on the aesthetic value of monuments, which in his opinion is just as important as documentary value, although less frequently recognised and given expert consideration. Without it, in Stele's view, the documentary protection of a monument is less successful, no matter how significant it may be. The conservator should therefore choose measures that will contribute to the preservation of the monument but, at the same time, will not reduce its documentary value. The same approach is also needed in the case of the preservation of individual architectural elements, old inscriptions, artistic details on façades, and so on. When it comes to presentation, there is in fact a danger that excessive zeal and poor understanding of conservation principles can actually destroy the aesthetic potential of the monument we are trying to save. The conservator therefore needs to ask themselves what the aesthetic potential of the monument is. Over time, the aesthetic potential of a monument deteriorates, changes and is destroyed. It is therefore necessary to understand that this potential is not tied merely to one style, iconography or individual technical solution, but is rather the result of all these elements combined. Additionally, in the case of an architectural monument, it is necessary to add the value it possesses by virtue of its location and the urban ensemble within which it is situated.[2]
As regards concrete restoration interventions on paintings, Stele therefore takes the view that it is necessary to protect the surviving state without supplementing or remodelling it, in other words without "improving" it. When removing unsuitable secondary interventions, the restorer must take into account all material and technical elements of the monument and have a thorough knowledge of old techniques. When preserving heritage, the conservator must avoid the exaggerated protection of documentary value on the one hand and excessive aestheticisation on the other, since real life expects monument protection to result in a compromise of functionality, documentary value and aesthetics (Stele, 1955: 22). It is important for the conservator to be aware that while the mutilated aesthetics of a monument mean that no amelioration is feasible – let alone restoration – it is possible, through correctly understood documentary conservation, to affirm the aesthetic potential of the monument insofar as time has not weakened it. At the same time, however, we must not prejudice its aesthetic potential with falsifications or erroneous documentary considerations. In this regard, Stele cites contemporary examples of inappropriate plastering (in the context of an attempt at levelling a wall) and, at the opposite extreme, uncovering a stone wall in its entirety. He also draws attention to the unsuitable implementation of transitions between preserved wall paintings and newly plastered areas of wall. He confirms the opinion of the contemporary Italian conservator Ferdinando Forlati, according to whom it was first of all necessary to preserve the old without demolishing and rebuilding, while consolidating everything invisibly with the help of modern techniques; to rebuild demolished elements using old materials, being careful to ensure that the added elements do not falsify the original; and to ensure that the monument is presented solely with its own aesthetic potential, mutilated though that may be (Stele, 1955: 9). Stele concludes with the thought that it is also necessary to understand certain cases of additional painting – those that help give an impression of uniformity while not reducing the aesthetic character of a monument – as an invitation to the observer to participate creatively in the experiencing of a work of art. In this way the work of art can have the maximum effect on the person viewing it. Stele also draws attention to authentic materials and the methods of their use and offers a formulation of the aim of monument protection.[3]
For Stele, then, the aesthetic value of a monument, which is dictated by life, was just as important as its documentary value. A restorer may only additionally emphasise aesthetic value (reconstruction) if in doing so they respect and preserve the documentary value of the original. Stele points out that the aesthetic value of a monument also lies in its imperfection and damaged state, in that the aesthetic potential of a monument lies in a harmony of character, material and surroundings. Conservation interventions must therefore be discreet and unobtrusive.
A review of the international documents produced in Stele's time in connection with the presentation of finds in or on heritage structures indicates a relative uniformity of starting points. Finds should be evaluated through the prism of time and the contemporary problems of the period in which they were created. The Athens Charter (1931) thus notes in its General Principles that in some countries there is a "general tendency to abandon restorations *in toto* and to avoid the attendant dangers by initiating a system of regular and permanent maintenance calculated to ensure the preservation of the buildings." The Charter recommends that the historic and artistic work of the past should be respected, without excluding the style of any given period. If it is necessary to use new materials during restoration, these should always be recognisable as new in comparison to the original substance. Before all interventions, it is therefore necessary to carry out a thorough analysis of the causes of damage and investigate the different types of damage (Doctrine I, 2003: 17–24). The International Charter for the Conservation of Ornaments and Sites (the Venice Charter), adopted in 1964 at a time when monument protection institutions were being established in this country, clearly stated that the valid contributions of all periods to the building of a monument must be respected during restoration, since unity of style is not the aim of a restoration. When a building includes the superimposed work of different periods, the revealing of the underlying state can only be justified in exceptional circumstances and when what is removed is of little interest. The Venice Charter also underlines that

1 "... The extensive rebuilding and reconstruction of monuments must therefore be avoided, not only because it destroys precious monuments of later periods, but also because through it we arbitrarily change the form and appearance of monuments, in this way depriving them of artistic and historical value . . . A restored monument is like a falsified document, on top of which it also loses its artistic value, poetry, harmony and picturesque charm. Such restoration is not conservation but destruction." (Pirkovič, 1993: 21)

2 "... Therefore we shall not strive for the purity or full expressiveness of a so-called style, but rather for the affirmation of all elements of recognised aesthetic potential, regardless of their date of origin, style and the material used . . . The aesthetic potential of architecture is not rooted merely in its more or less cultivated form, in one style or another or in the richness of the material, nor does it lie in its private or public purpose, but in the overall expression of all of these things ..." (Stele, 1955: 5–12)

3 "... Recognition of the incorrectness of the desire to restore monuments to their original state also has its correlate on the aesthetic side; the original aesthetic effect cannot be restored either, and it is only correct to affirm it within the context of the surviving features of the monument's own aesthetic potential. So: Conserve, don't restore – but conserve while taking into account the aesthetic effect of the conserved monument!" (Stele, 1955: 12–13)

the process of restoration is a highly specialised operation which must stop at the point where conjecture begins. Any extra work added for technical and aesthetic reasons must be distinct from the original (Doctrine I, 2003: 26–27).

Milan Železnik dealt in detail with the theory of monument protection in two articles written twenty years apart. In the first of these, from 1960, he talks about protecting the original appearance of a monument as complex of individual elements that, in their reciprocal relationships, give the monument its essence, its individual appearance (Železnik, 1960/61 48–55). Železnik saw the monumental ideal as lying in a stylistic unity that is closely connected to the original function, and therefore believed that any stylistic disunity merely complicates the issues surrounding the monument. The conservator should therefore direct interventions so as to remove all elements that do not accord with the essence of the monument or, as necessary, add elements that contribute to the greater originality or integrity of the monument (Železnik, 1960/61: 51–52). This method contrasted with the Vienna doctrine of monument protection that by now was more than half a century old, since "purification" simultaneously means reconstruction. This can easily lead to a falsification of facts and the deliberate erasing of traces of a more recent period. In his second article, published in 1981, Železnik places the concept of the integrity of a monument in the foreground – a concept that includes the notions of completeness and intactness (Železnik, 1981: 65–66). This article was written immediately after the restoration of the Homan House in Škofja Loka, which is the best example of Železnik's thinking at that time (Fig. 1). During restoration of the façade of this building, Železnik encountered multiple layers of decoration and a mass of architectural elements that illustrated the start and subsequent progress of the architectural and artistic development of the house from the fifteenth century to the twentieth. He decided to present and restore all the uncovered decorative façade elements and architectural elements. "Purification" of the monument back to its original appearance would have required, if taken to the extreme, the demolition of individual parts of the building and the decision not to preserve and present any finds from after the sixteenth century. With this article, Železnik laid the foundations of the type of conservation presentation still frequently used today, where the chief task of monument protection cannot be that of restoring a monument to its original appearance – given all the later remodellings, additions and transformations it has undergone – and can only be the presentation of all the essential elements of the monument. Following restoration, the monument should thus become an open book of its own history (Železnik, 1981: 65–66). Jelka Pirkovič called this phenomenon "the archaeological method raised to the level of presentation", which means that all finds are presented (Pirkovič, 1993: 41). It should be emphasised here that this type of archaeological/universal presentation contrasts with Stele's conception of aesthetic presentation, which for him is just as important as documentary presentation.

Ivan Komelj offered further reflections on the question of the presentation of all layers found during restoration, and on its aesthetic component, in a paper presented in 1960. He believed that, for the art historian, reconstruction is unnecessary from the point of view of study, given that we are no longer dealing with an authentic source that is susceptible of study, while at the same time he realised that reconstruction contributes to the illusion of the lost monument. He emphasised that presentation has a threefold purpose: to extract the original artistic image of a monument, to illustrate its genesis, and, at the same time, to preserve or recreate a harmonious mood (Komelj, 1960: 50–52). That same year, in the context of the renovation of old town centres, Nace Šumi wrote that we can never fully realise the fundamental principles of historical architecture and that we are always creating something new (Šumi, 1960: 74–76).

Conservators in the 1960s – Stele's pupils – gave intense consideration to the questions of presentation and the preservation of authenticity during restoration and partial reconstruction. Several attempts at presentation were carried out in the field, ranging from "purification" to the multilayered presentation of all visible evidence of the development and aesthetic appearance of a building. Multilayered presentation perhaps established itself best in town centres, where restorers encountered numerous older finds, since the owners of buildings almost never demolished their façades, opting instead to give them a new expression in keeping with contemporary tastes and development. During these first investigations, restorers would come across façades that had been painted several times, bricked-up window openings with preserved window frames, converted courtyard arcades, and so on. The section entitled "About Façades" in issue No 31 of monument protection journal *Varstvo spomenikov* (1989) shows us the direction taken by the debate on façade renovation among conservator-restorers in the late 1980s. With the development of the restoration profession, the appearance of various types of construction and restoration material, the structural and technical dilemmas faced during restorations and the increasing inclusion of architects among the ranks of conservators, discussion in this publication focuses above all on the quality, function and scope of interventions, and on the causes of the decay of façades and façade decoration, along with the possibilities of repair. The contribution of restorer Ivo Nemec reveals that the problem of the removal of old plasterwork, stuccowork and other decorative façade elements and their replacement with new, less suitable materials, the realisation of stuccowork decoration in cement, and so on, was particularly acute in that period. Nemec draws attention to the material evidence contained in every layer of old plaster that is lost forever when those layers are rigorously removed and replaced by new plaster (Nemec, 1989: 45–46). Josip Korošec draws attention, in his article, to the questionability of presenting all phases of a building's development and all finds on its façade and believes that this form of presentation converts a monument into a chronicle of its own development. At the same time, he points out that at no stage in their development did buildings ever have such colourful decoration (Korošec, 1989: 59–60). Janez Mikuž's article also reveals disagreement with contemporary approaches involving the removal of plaster layers and their replacement with new, reconstructed multilayer presentations and eternal compromise solutions that are almost always at the expense of heritage. Mikuž considers that reading the development of the building via its façade means the destruction of its historical message, since no matter how complete the documentation and how careful the taking of samples, this stratification nevertheless means the destruction of part of the substance of the monument (Mikuž, 1989: 63–70).

The 1990s saw the adoption of two significant documents in the heritage conservation field: the Nara Document on Authenticity (1994) and the Burra Charter (1999). The former went beyond the Venice Charter by explicitly highlighting authenticity as the essential qualifying factor in any evaluation of heritage. The understanding of authenticity plays a fundamental role in all scientific studies of the cultural heritage (point 10). Respect for cultural and heritage diversity requires conscious efforts to avoid imposing mechanistic formulae or standardised procedures in attempting to define or determine the authenticity of particular monuments and sites (Doctrine II, 2014: 65–69). The Burra Charter, on the other hand, emphasises the fact that places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us. They are irreplaceable and precious. The Burra Charter advocates a cautious approach to change: do as much as necessary to care for a place of cultural significance and make it usable, but otherwise change it as little as possible so that its cultural significance is retained.

In 1997 the Slovene Art History Society published *Umetnostna zgodovina in spomeniško varstvo* ("Art History and Monument Protection") to mark the 75th anniversary of its founding. In this publication, prominent representatives of the art history and conservation fields set out a number of important starting points for the further development of the conservation profession. Nace Šumi's overview of the development of conservation in Slovenia highlights the present dilemma as one of the biggest in the conservation field and points out that we have got so used to simultaneously viewing and enjoying elements of different styles and periods in monuments that we are no longer aware that these are new creations of the conservation process that did not even exist during the individual chronological stages of the monument's development (Šumi, 1997: 29–30). The same publication contains an article by Ivan Stopar which attempts to present, on the basis of the different conservation approaches that have succeeded each other in different periods, examples of suitable and less suitable final presentations (Stopar, 1997: 43–48). He begins by presenting Stele's 1920 decision on the method of presentation of the church at Kostanjevica, which was later (in 1957) recapitulated and continued by Ivan Komelj and the architect Milka Čanak. During the course of the work, the restorers encountered numerous hitherto unknown architectural elements dating from the first half of the thirteenth century and later concealed by baroquisation. Stele's aim was essentially to present the Romanesque elements of the church in a manner that would not encroach upon the integrity of the later baroque elements, while at the same time these older elements should also be presented in a sufficiently clear manner for everyone to be able to recognise the remains of the church's Romanesque predecessor. A seemingly identical approach, though with a different final presentational outcome, was taken, in Stopar's opinion, by Železnik when restoring the façade of the abbey church at Stična. This church also underwent baroquisation in the seventeenth century that covered many of the traces of past periods. Milan Železnik's starting points for this restoration or presentation were, above all, the lessons he had learned during the restoration of the Homan House in Škofja Loka (Fig. 1); he wanted to clearly preserve and present all the older traces found during the restoration process. Following restoration, the church had gained, along with its baroque interior, a completely "new" exterior. While the conservator's aim was to present the two main phases in the architectural development of the church in the best possible manner, in doing so he simultaneously gave the church an appearance it had never had. Stopar's intention was not to critically assess the work of other conservators, but rather to emphasise that no serious intervention on a cultural monument is any longer possible or morally justifiable if not based on solid, duly verified analyses and starting points and a vision of what the monument should look like once restoration is complete, where the requirement that no intervention should affect the historical substance of the monument or undermine its narrative remains indisputable. And secondly, no conservation intervention, no matter how correct and technically sound, can be justified if no clear report or documentation on it exists (Stopar, 1997: 46–48).

The year 2004 saw the publication of *Vračanje izvirnih podob – Restavratorski posegi* ("Restoring Original Appearances – Restoration Interventions") to coincide with the European Cultural Heritage Days event. Articles on the development of the restoration profession and conservation campaigns were contributed by conservator-restorers and architects from the ZVKDS Restoration Centre. The period since 2000 has been, in comparison to past decades, a period of rapid progress in the restoration profession, both with regard to materials and techniques and in terms of approach and method of work. The chapter on authenticity reveals that the authenticity of architectural heritage is one of the pri-

ority principles that must be taken into account when considering an intervention, which means that every planned intervention must first be evaluated from this point of view. All newly inserted material and every modern technology inevitably has consequences that affect the existence of the original, so consideration of the compatibility of the new with the old is essential (DEKD, *Vračanje izvirnih podob – Restavratorski posegi*, 2004: 40–41).

Approaches to the presentation and interpretation of façades

Since Stele and the Venice Charter, then, conservation in Slovenia has focused on revealing and presenting individual phases of construction, an approach that was initially conditioned by post-war repairs to damaged monuments and later became a classic *modus operandi* of conservation that necessarily involves at least the partial removal of material evidence. Following the establishment of the monument protection service, the principle gradually developed that conservation research and restoration represented the last act in the "life of the monument". This was the origin of the liberal removal of plaster layers and other construction materials from monuments and their replacement with new materials. Another result of this approach is the presentation of the uncovered remains of past phases of construction. In recent years the documentation generated in this process has been increasingly accurate and complete, although it is never – and never will be – an equal substitute for the removed original material substance. Conservators have always been more or less aware of this, so today we attempt to preserve as much original material in the structure as possible, to the greatest possible extent. Investigations (probes) are today still connected to direct intervention in a structure and its historical layers. Present-day practice has, alongside suitable documentation, which in most cases is prepared by conservators and conservator-restorers, several methods of presentation at its disposal.

The tradition of façade painting was particularly strong in the Gorenjska region between the sixteenth and eighteenth centuries, not only in town centres but also in market towns and villages, so there have always been a large number of finds in this region. One example of a multilayer presentation is the restoration of the façade of the Pavšlar House in Kranj (Fig. 2), where the tradition of painted quoins was so strongly developed that it was possible to emphasise each stage of development of the house with a different type of painted quoin. Three types of painted quoins have been reconstructed on the main frontage. Several other such presentations can be found in town centres around the Gorenjska region, the richest of them on the façades of the most distinguished houses. The majority of these restorations date from the 1970s and 1980s, when conservators unanimously accepted the multilayer presentation type with regard to the aesthetic component of the monument as a whole. Owing to the aesthetic effect of this type of presentation, we can encounter, for example, more recent painted quoins that are emphasised merely in outline so as not to intrude on the older elements of the presentation; an example of this is the façade of the Tollhouse (*Mitnica*) in Kranj (Fig. 3). In other cases more recent quoins are reconstructed on a lateral façade, as in the case of the Šivec House in Radovljica (Figs 4, 5). With presentations from this period we almost always talk about reconstructions, because few details with original painting have survived. Such restorations were often carried out in a hurry, without previously or simultaneously prepared documentation on the basis of which we would be able to evaluate each intervention and the decision behind it separately. This applies in particular to reports on probes, measurements and the evaluation of finds. In many cases an article written by the conservator is the only surviving material.

Presentation of the architectural development of a building and the aesthetic development of the façade

This method of presentation is a frequent choice above all in the case of façade restorations on more important and larger buildings, since these were the property of representatives of the richest classes of society and were therefore frequently the object of extensive and high-quality remodelling. The answer to the question of who this form of presentation is aimed at is probably "the general public", who should be able to read the façade like an open book of the architectural development of the building in question (Železnik, 1981: 65–66). It is worth emphasising that in addition to illustrating the architectural and artistic development of the building/façade, this type of presentation communicates a powerful message that is directly connected to the presentation and creativity of conservation work and to emphasising the importance of heritage protection and conservation. It is often the case that the developers themselves are anxiously awaiting the outcome to see what will be discovered and what the "new" appearance of the restored building will be.

This type of presentation has to be divided into two subtypes, namely presentation of the architectural development of the building and presentation of the development of the aesthetic appearance of its façade. Presentations of architectural development include uncovered and presented individual elements that indicate the original dimensions and design of the building (bricked-up windows, projecting upper storey, etc.). Presentations of the development of the aesthetic appearance of a façade, on the other hand, include all artistic elements of the façade (quoins, painted fields, soffits, etc.). It is, in fact, artistic elements that are most frequently the subject of restoration and reconstruction. Owing to the state of the plaster of the façade that acts as their support, it is often difficult to protect them in an uncovered condition and present their authentic state and appearance. In such cases we are compelled to remove them and carry out reconstruction. In the best-case scenario, we conserve them, document them and cover them up again.

This type of presentation is only of good quality if the uncovered finds are unique and presented in such a way as not to encroach upon the integrity of the appearance of the most recent presented phase in the monument's development. Such presentation is more successful if the earlier appearance of the building is emphasised both by presentation of its architectural development and by rediscovered aesthetic elements. Even a presentation of just the architectural development of a building is less disturbing than, for example, a fragmented presentation of all the tiniest architectural and artistic details, with no regard for how they are perceived or for the final appearance of the façade. Regardless of all the effort invested in such a presentation, it should be remembered that it gives the façade an appearance it never had and thus converts the building into a support for a museum-like presentation of its own development. Below I present the restorations of the façades of the most important examples of burgher architecture to have undergone comprehensive renovation between 1970 and 2000. The examples presented here have also become a *modus operandi* for more recent restorations and presentations of façades. A similar "museum-like" approach to presentation is still in general use today, although it has not yet undergone in-depth analysis of its expedience and suitability. In my view, this is an urgent task for the modern conservation profession.

The façade of the Tollhouse (Fig. 3) in Kranj is a presentation of the earliest phase of building from the sixteenth century, including the projecting section of the upper storey supported by stone corbels and the quoins decorating the first-floor corners, combined with details of later phases on the second floor (believed to have been added in the eighteenth century). In order that the second floor should affect the presentation of the first floor as little as possible, the quoins and more recent painted pilasters dating from the first half of the nineteenth century are presented in outline only. The outlined artistic elements of the second floor are not only a reconstruction, they are a complete construct, since they were originally coloured. The red-painted frame around the main entrance dates from 1809, as shown by the date found above the painted doorway. This therefore means that on the ground floor we do not have a uniform presentation of the building's appearance in the sixteenth century, but also its later aesthetic enhancement. While the presentation is extremely rich in aesthetic terms, it is essentially a construct that is very hard to read.

The Homan House in Škofja Loka (Fig. 1) has been one of the most notable houses on the town's Mestni Trg [Town Square] since it was laid out. Owing to the large number of presented details, the architectural development presented on the façade is even harder to read than in the case of the Tollhouse in Kranj. The easiest way to read the façade is to read it by phases of architectural development. The original house was narrower and lower. The oldest phase is represented by the Gothic windows on the first floor and the alternating gold and ochre quoins on the far left of the building. Following an earthquake in 1511, the house was enlarged in the direction of the square. The corbelled oriel at the SW corner bearing the coat of arms of Carniola and the date 1529 also dates from this period. The frescoes of St Christopher and a soldier date from the sixteenth century but were not created at the same time. The next phase is from the early seventeenth century and includes the black-and-white window frames and the painted frieze below what were then the eaves, since at that time the house only had one upper storey. A new storey was added in the eighteenth century. The new stone window frames also date from this period. The old Renaissance windows in the oriel were removed and replaced with new ones, in an attempt to give the building a more uniform appearance. The bands of the quoins on the corners of the oriel are the result of a restoration in the nineteenth century. The balcony – famously used as a vantage point by the painter Ivan Grohar – dates from the same period.

The house at No 25 Linhartov Trg [Linhart Square] (Fig. 6) in Radovljica is one of the oldest houses on the square. The quoins presented on the right-hand side of the façade probably date from before the widening of the projecting upper storey in the late sixteenth century. The house is built on two axes, which is evidence of its great age. There was once a narrow passage between this house and the neighbouring building. This was bricked up when the house was widened.

When presenting individual elements of older phases, it is easy to arrive at the hybrid appearance mentioned earlier, which can lead to confusion when it comes to understanding the presented elements on a façade. Despite this risk, I believe that this possibility of presentation should not be discounted, although it must not be allowed to disfigure the uniformity of the presented appearance of the façade. Exceptional finds (not all finds!) should be presented in such a way that they do not compromise the integrity of the façade's more recent appearance, in other words the presentation should not confuse observers and leave them unable to tell what belongs where or, as a result of the overabundance of elements, cause them to perceive the façade as a uniform whole because they are unable to distinguish more recent interventions from older traces. If we find older painted quoins at the edge of a façade, for example, we can restore and present them to a certain extent, but it would not be appropriate to carry out a multilayered reconstruc-

tion on the basis of uncovered clues or details from several periods, since such a presentation would have no real value in the sense of the conservation of authentic finds *in situ*, while at the same time the observer would be confused by the presentation of information that has been torn from its original context. In the case of façades such as that of the Homan House, the correct approach, before making a decision on presentation, would therefore be to draw up a plan of the reconstruction of the architectural and aesthetic development of the façade and insert into it, phase by phase, all the artistic finds on the façade – and not merely the architectural development. In this way we would determine the scope of a presentation that would still be of sufficiently high quality and sufficiently legible. If this is not possible, any presentation is condemned in advance to being incorrectly perceived and serving merely as a collection of found/reconstructed elements.

Presentation of the construction method

Judging from the information available in the archives of the Kranj regional unit of the ZVKDS, this type of presentation began to appear more frequently in the late 1980s. It consists of a presentation of the method of construction, which usually has nothing in common with the original appearance of the building or with any intermediate phase of development. Essentially, it is a presentation of the enthusiasm of specialists for a piece of construction. There are fewer examples of it in burgher architecture than in ecclesiastical architecture.

Enthusiasm for a stone or brick wall gradually shifted into the interior of buildings. One of the first to advocate the removal of plaster was the architect Jože Plečnik. His "stripped" walls with prominent grouting, like a modern interpretation of the wall, are famous. Even today, many developers are keen to present part of a stone wall or a brick arch in the interior of a building. We no longer agree with this type of presentation in any modified form, since it represents a deviation from the original appearance of the building without any expert justification.

Removal of the most recent phase and restoration or reconstruction of the oldest façade

This type of presentation is technically the most demanding and carries the greatest responsibility, while at the same time it is also dependent on the find itself. If the results of probes have shown that there are key architectural elements of an earlier date beneath the surface, these would first need to be precisely documented and entered into the architectural measurements of the existing state. In such cases, a working group of several experts is formed to attempt to evaluate the intervention from an interdisciplinary perspective and weigh up the loss of the existing most recent façade and the possibilities of reconstruction and restoration of finds. Presentation of this type is, in principle, suitable when the existing appearance of the façade is of poor quality, while the finds beneath it are of exceptional significance for the architectural development of the building and the historical context of the setting in which the building stands. The most extensive example of this type of presentation in the Gorenjska region is the Šivec House in Radovljica (Figs 4, 5). In the late nineteenth century, a time of widespread façade renovation, the projecting upper storey was bricked up and the entire façade brought to the same level. Fortunately, the majority of sixteenth- and seventeenth-century architectural and painted elements were preserved. When the restorers began probing the façade, they encountered the bricked-up corbels supporting the projecting upper storey. Following partial removal, the restoration committee (consisting of Olga Zupan, Peter Fister and Cene Avguštin) decided that it was necessary to completely remove the nineteenth-century brickwork and reconstruct the older appearance of the façade, returning the building to its original design. An important role in this decision was played by the surviving Renaissance ground plan of the building and the intention of the municipality of Radovljica to use the building to house a museum. Despite everything, however, the members of the panel could not resist presenting the architectural development of the building and its aesthetic appearance. As a result, on the building's reconstructed sixteenth-century façade (the projecting upper storey), we have two types of painted quoins (presumably from the sixteenth or seventeenth century), a reconstructed fresco presumed to date from the seventeenth century, reconstructed window frames and a doorway which, in order to provide additional static support to the projecting upper storey, is positioned outside the level of the façade. The Šivec House is an example of a carefully planned reconstruction which, despite great efforts and interdisciplinary cooperation on the part of the experts involved, was unable to be fully realised. For numerous structural reasons, a number of compromises had to be made during the restoration of the façade, to the detriment of its final appearance, which raises the question of whether such an extensive reconstruction is actually worthwhile.

To summarise, the façade has maintained its authenticity above all in the presentation of the projecting upper storey, while the overall impression is above all the result of reconstructions. The plaster on the façade was replaced in its entirety, although unfortunately we have no detailed documentation on it or on the paintings. If we had restored the finds, retouching them as necessary, the presentation would have been of higher quality. Similarly, it would perhaps have been more appropriate to seek a more suitable static solution than that of allowing the main doorway to assume the role of static support of the projecting upper storey. Moving the doorway from the courtyard extension seems a suitable solution. The window frames are of finely worked concrete and are a brand-new and contemporary contribution to the presentation of the building. When presenting the original appearance of a façade there is no difficulty in presenting finds. Difficulties appear when decisions on the overall presentation solution begin to depend on urgent structural interventions, statics, properties of materials, and so on. When this happens we are frequently forced into compromise solutions that in most cases are to the detriment of conservation, technically correct restoration and suitable presentation. In such cases the façade also loses most of the valuable authentic materials that are a precondition for any new research or investigation of the building.

Presentation of the most recent appearance regardless of the quality of finds

The reason for this type of presentation is not usually the decision of a conservator, but rather a lack of funds or simply the developer's decision. In this case finds are merely documented and, in the best-case scenario, covered up again. There are no examples of this type of presentation in town centres in Gorenjska, so I present here the case of the house at No 1 Krvavška Cesta in Cerklje, which has been proclaimed a cultural monument of local importance (Figs 7, 8). In conjunction with the working group, and at the suggestion of the town's mayor, the conservator opted for presentation of the most recent neoclassical façade, which dates from the nineteenth century. Probing resulted in the discovery of baroque frescoes of St Florian and the Crucifixion dating from 1787 on the main façade. Before the restoration process began, these were removed and placed into storage. Other finds included carved baroque quoins, later rectangular quoins, traces of the original structure, evidence of later expansions and the raising of the structure by a storey, and baroque window frames made of tuff. The project did not include the restoration of finds and the original old plaster followed by presentation showing the house's architectural development, but instead saw the almost total reconstruction of the most recent façade design, which gives no hint at all of the building's rich architectural history (Figs 7, 8, 9). In view of the fact that the nineteenth-century façade is of poorer quality than the finds, while the older baroque façade is preserved almost intact, we should perhaps in this case nevertheless have opted for presentation of the older appearance, since this would have been entirely legible and complete and would not have significantly disfigured the simply designed more recent façade.

Another example that partly falls into this category is the restoration of the main façade of the Mally House in Tržič (Fig. 10), where we did not even undertake an investigation of the main façade because of the existing rich neoclassical façade. We merely restored the neoclassical façade – believed to date from after a fire in 1811 – to its original colour scheme.

This type of presentation is of the highest quality when we succeed in preserving the greater part of the authentic material beneath the presented most recent layer. This type of presentation also makes sense when window apertures, the main entrance, the ground plan, the state of conservation of the interior, etc., coincide with the most recent aesthetic appearance of the façade, which means that the last remodelling was also thorough and extensive inside the building. If the plaster and all the paint layers still adhere well to the substrate, the decision to proceed with a presentation of this type is the only correct one, since it will perhaps be possible in the future to uncover the paint layers and plaster layers using methods that will not require the total destruction of more recent layers.

Proposed aims

In order to improve the methodology of the restoration and presentation of façades, it is first necessary to re-evaluate the values of cultural heritage that we wish to preserve and adequately protect. Janez Mikuž defined them as appearance value, content value, material value, technical value and historical value (Mikuž, 1997: 51). The appearance value of heritage is easiest to understand in terms of perception. It concerns the impression left by a monument. Today the appearance value of heritage coincides with the current type of restoration, in the context of which priority is often given to structural and technical renovation, while it ends with the presentation of selected pieces such as wooden beams, parts of a stone or brick wall, stone window frames and doorways, etc. This is a modern, populist approach to restoration, where interventions that are merely solutions adapted from contemporary construction practice are implemented out while observing minimum standards of conservation. This category also includes complete reconstructions, in which stone walls are replaced by brick and the decorative elements of the façade are reconstructed on the façade layer. These may be perfectly correct from the artistic point of view, but in this way precious material values are lost forever.

The content value of heritage is the most abstract part of a monument. Failure to recognise this segment leads to a great many misunderstandings regarding purpose of use. In the case of burgher houses, ground floors have a special value and purpose of use. In most cases they were used for trade or craft activities. Now that such activities have moved to the outskirts of towns, they have remained empty. Many people would like to convert them into additional residential premises, but this leads to numerous architectural and structural difficulties.

The importance of materials or substance is the segment of a monument that disappears most quickly. With it, the authenticity and historical message of the monument are lost, since the surviving substance contains copious information about old techniques and technology, materials, structural solutions, and so on. This information talks to us about the period in which the monument was built, about its builders, the people who commissioned it, and so on. Conservation of this segment is the basis for research of a monument. Conservators in the future may have at their disposal methods that are more complex and less invasive, so safeguarding the original substance of materials is of key importance for the protection of cultural heritage. The historical importance of heritage is related to research and information on the creation and significance of that heritage, which in the long term strengthens our common identity.

The adequate protection of a façade is therefore not determined merely by a correctly chosen plaster or preserved detail of painting, but by the preservation of the authenticity of all elements in a manner that is as complete as possible. Since the majority of cultural monuments have undergone multiple secondary remodellings, it is the task of the conservation profession to separate the original components of the monument from the secondary traces of time, which may either reduce or increase the value of the monument, and prescribe the scope, method and quality of interventions, which on the one hand mean an extension of the life of the monument and, on the other, the preservation of all its identified and protected components. I have divided these into four main groups, partly based on Fister's *Glossary of Architectural Typology*, in which architectural elements are divided into three categories: parts of the building, apertures and decorative architectural elements (Fister, 1993: 55). The above components are of equal importance in constituting the protected appearance of a façade, and thus of the building, and take their place alongside research and the analysis of archival sources in providing us with basic information about the building. I have classified the protected components of the façade by type, ranging from a cause of origin that created the purely physical substance of the monument, to the minute details of proportions and relations that are not of key importance in terms of construction but are the elements on which the final assessment of the quality and heritage value of an immovable monument eventually rests. This classification also presents the degree of protection from the point of view of the average user or developer, where the protection of function and functionality is of primary importance, while the protection of proportions is, generally speaking, less important or practically negligible.[4]

Protected components of the façade:

FUNCTION AND FUNCTIONALITY		
DESIGN	2.1 Architectural elements/parts of the façade	2.1.1 Overhanging roof 2.1.2 Façade 2.1.3 Openings (window frames, doorway, etc.) 2.1.4 Projections, niches, etc. 2.1.5 Plinth course
	2.2 Decorative elements of the façade	2.2.1 Wall paintings 2.2.2 Façade elements 2.2.3 Architectural sculpture 2.2.4 Decorative treatment of plaster
	2.3 Fixtures	2.3.1 Windows 2.3.2 Doors 2.3.3 Shutters 2.3.4 Balustrades, etc.
MATERIALS	3.1 Lime	3.1.1 Lime mortar 3.1.2 Lime plaster 3.1.3 Other binders
	3.2 Stone	
	3.3 Wood	
	3.4 Metal	
	3.5 Brick	
	3.6 Modern materials	
PROPORTIONS	4.1 Width : height : depth	
	4.2 Filled : hollow	
	4.3 Plastic articulation : flatness of wall	
	4.4 Colour : whiteness	

The value of a façade is therefore a complex interweaving of numerous factors. An immovable cultural monument, of which the façade is a part, is a material remnant of a time and a place. It communicates with its surroundings on numerous levels, in terms of its appearance, its content, its substance and its history.

The restoration of a façade is therefore a highly specialised and complex process with clear technical starting points, which should not be separated from research, protection and restoration of the building as a whole, although in practice interventions on façades are often done separately from the integrated restoration of a building. Every restoration begins with preliminary preparations and research which give the restoration a solid technical basis and make the process easier, while also ensuring that the presentation is of better quality. Restoration consists of several phases: recording, art historical analysis/topography, evaluation or valorisation of the building as a whole, research of materials, initial and ongoing documentation of research and restoration procedures. Under the published cultural protection criteria of the ZVKDS, all this information forms part of the analytical part of the conservation plan, which must be drawn up in accordance with the Rules on the Conservation Plan (UL RS 66/09; Kovač, 2004: 170–178).

The biggest advantage and, at the same time, the biggest difficulty of contemporary conservation is the introduction of modern materials. On the one hand these can rescue a building from certain decay and emphasise it effectively in the aesthetic sense, while on the other hand they can deprive it, as a result of incorrect understanding of its protected components, of those valuable elements that have caused us to identify a given structure as a cultural monument. If we use new, modern solutions and materials to resolve structural and technical difficulties (static solutions, solutions to problems of rising damp, moisture infiltration, etc.), the building can still preserve these protected components. Once we start encroaching directly on protected components with modern materials and assigning them value solely on the basis of their function, and consequently begin replacing them with modern solutions, we start to deprive the cultural monument of its monumental qualities.

Among developers, the least respected and most reluctantly accepted protected component is that of proportions. At one time these were carefully thought out and organised into a harmonious whole, taking into account classical proportions and relations. The classical architectural composition of a building is apparent in the relatively simple relations that are maintained in the design of the building mass in relation to the roof and then down to the smallest elements that articulate the façade (Deu, 2004: 144). The post-war period of functionalism in all its many variations transformed restoration into a process of technical repair, the principal and indeed only aim of which was to eliminate individual construction problems troubling the owner. But the renovation of cultural heritage is not only this, since it always involves an intervention in the sensitive harmony of a historical whole that in the end also has a spiritual dimension.

The fixtures of a building are one of the most vulnerable protected components, and therefore an eternal topic of conservation. They are protected in terms of function, design (type, shape of window or door, method of treatment, etc.), material (wood, metal, etc.), colour and proportions (width and thickness of glazing bars compared to glazed surface, width of the window frame compared to the window aperture, ratio of windows to the façade as a whole, and so on). The basic functions of windows and doors are, of course, to let light and air into the interior and to provide protection. We look out through windows and come in through doors. Ever since antiquity, these functional uses have been combined with an aesthetic role that concerns the view of a structure from outside: the view of the whole. The oldest surviving houses in the town centres of our region date from the fifteenth or sixteenth century. No original window casement from this period survives in any of Gorenjska's five largest towns – in contrast to doors. There are, however, some surviving windows from the eighteenth and nineteenth centuries. Since the biggest concerns of the average present-day owner are heat loss and saving on heating costs, it is common for them to wish to replace old windows with new insulated glazing. For technical reasons, insulated glass cannot be made with the same dimensions as old windowpanes and is also designed differently. Glazing bars and window frames are wider, which leads to a variety of unsuitable solutions such as glueing or puttying glazing bars directly to the glass. The best solution is therefore to preserve the outer double-casement window

4 In view of the selected topic, I shall focus only on components of the façade, although with minor modifications these considerations could also be applied to the building as a whole.

and replace the inner window with new insulated glass.
When it comes to choosing materials, it is important to have a good knowledge of the materials that were used for the original façade and to be familiar with the various causes of damage. These are most frequently weather, biological factors (parasites, mould, damp, etc.) or mistakes and the use of unsuitable materials in earlier repairs. The best approach to restoration is to use the same materials (at least as a basis) as the original and preventively eliminate the causes of damage. The first choice for façade restoration is lime plaster. All other commercial plasters advertised as vapour-permeable or breathable are merely approximations of lime plaster, some better than others. Silicate and silicone plasters are still used in town centres, making façades look plastic, cast and flawless, as though the houses had only just been built (Deu, 2004). Even when choosing colours, it is important to take into account the fact that up until the twentieth century all houses were coated with limewash containing mineral pigments. Modern paints, despite their breathability, are synthetic and therefore have an artificial effect. The shades are no longer those of the original buildings, which means that we suddenly have a building that, though renovated, seems somehow alien to us and gives the effect of being newly built, which is the result of the use of the wrong materials and techniques.
Façade restoration very often takes place separately from the complete restoration of the building. The main reason for this is the exposure of the façade, which means that it needs restoration more frequently than the interior or the roof. Even so, it must be treated as an inseparable part of the protected whole. Most façades have been restored at least once since being proclaimed monuments in the 1980s. Since this was a period in which the removal of complete layers of plaster was common, few façades today still preserve their historical layers. As a result, we most commonly encounter façades that are just a few decades old. In many cases the documentation produced at the time is deficient or, for a variety of reasons, non-existent, so we therefore approach the inspection and investigation of the façade as though we were tackling it for the first time. We look for the remains of old plaster layers at the corners and below the eaves in order to be able to draw up documentation that is as correct as possible and will then serve as a basis for subsequent interventions.
When restoring the protected components of a façade, we must try and understand that this is not merely a structural restoration in the course of which we wish to improve the aesthetic appearance of the façade and its energy efficiency, but an integrated intervention that will have a direct effect on the existence of the monument as a whole. Regarding function and functionality, we must accept the fact that a sixteenth-century stone burgher house cannot and should not become, for example, a modern, low-energy passive house. Similarly, we cannot carry out renovations and interventions on an old house that would in any way affect the stone structure of the walls or have a negative impact on it. The removal of decorative elements of a façade in order to cover it with modern thermal insulation materials is unacceptable. Architectural fixtures must be preserved and restored for as long as possible and then, on the basis of carefully drawn up documentation, replaced by suitable copies, and not simply the closest approximations that are currently available.
The task of the conservator is to identify protected components before embarking on cultural heritage interventions and at the same time to adequately evaluate damage or secondary traces of the passage of time. Only in this way can we determine a suitable method of restoration and eventual opportunities for modern creativity. If any of the protected components has deteriorated, it can be replaced, after careful documentation, with a new one that, depending on the degree and manner of protection, can either be an exact replica of the removed deteriorated component (in design, materials and proportions) or a brand-new modern contribution to the whole, although not to the detriment of the building's protected authenticity and message. Furthermore, modern solutions/interventions should be a product of the finest architecture, both in the selection of materials and in their design and siting. If additional static or structural solutions are necessary, these should be implemented in accordance with the greatest possible protection of the basic substance of the building, compatible with existing materials and realised in such a way that the building will function in accordance with the needs and opportunities given to it when it was built.

Summary

Protecting the authenticity of the protected components of a cultural monument is one of the primary tasks of the conservator's efforts and activity. It is important to realise that a monument is not just a support for the aesthetics of a past period, but also a technical or technological document, which means that it is the task of every conservation intervention to preserve material remains that provide us with evidence of the technology used. Without preserved material remains, a cultural monument would be left without the identified and evaluated qualities that created it and on the basis of which it is possible to investigate and research it over and over again. It would become a kind of falsification of itself. Here, of course, we cannot overlook the factor of impermanence or the fact that immovable cultural heritage is in constant use, and is therefore often subject to renovation and thus exposed to the risk of losing part of its authentic value and its capacity to convey a historical message. The conservation profession must therefore focus its efforts in the first place on preserving material authenticity. It does this through traditional restoration and through conservation-restoration interventions that try to consolidate and renew existing materials in a manner that is compatible with the original materials, at the same time as creating conditions which ensure that the circumstances for their decay and deterioration will be minimal. Once all possibilities of preserving material authenticity have been exhausted, the conservator gives consent, on the basis of careful documentation of the existing state, for the replacement, restoration or reconstruction of the original materials. The replaced element or component should therefore be of the same size, shape, material, proportions, colour, etc., as the original.

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Popotresna obnova cerkve rojstva Device Marije v Policah pri Cerknem

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Ključne besede: cerkev rojstva Device Marije, Police pri Cerknem, restavriranje, stenske poslikave, fasade, statična sanacija, popotresna obnova

Izvleček

V letih 2018 in 2019 je bila v okviru popotresne obnove Posočja statično sanirana cerkev rojstva Device Marije v Policah. Sočasno so na objektu potekala tudi zaščitna in prezentacijska konservatorsko-restavratorska dela, s katerimi so se vse kvalitetne arhitekturne in umetnostnozgodovinske prvine v notranjščini ohranile in konservirale, na zunanjščini pa je bila poleg odkrivanja in konserviranja opravljena tudi celovita estetska prezentacija.

Uvod

V okviru popotresne obnove Posočja se je v preteklih desetletjih statično saniralo veliko objektov kulturne dediščine, med njimi vrsta cerkva, ki imajo status nepremičnega kulturnega spomenika. Ti objekti so za slovenski umetnostnozgodovinski patrimonij izredno pomembni zaradi svoje umetnostno-arhitekturne, zgodovinske in arheološke vrednosti, v njih so ohranjeni pomembni artefakti, ki so del cerkvene opreme, in v veliko primerih stenske poslikave, ki časovno segajo vse do srednjega veka. V preteklosti je bilo v okviru popotresne sanacije za obnovo pomembnejših spomenikov veliko sredstev namenjenih tudi za nujna konservatorsko-restavratorska dela, s katerimi se je ob sicer zelo agresivnih, a s statičnega vidika nujnih posegih zagotovil obstoj najpomembnejših varovanih sestavin. Mnogi med temi objekti so tako z dopolnjujočimi gradbeno-statičnimi in konservatorsko-restavratorskimi posegi prvič po dolgih stoletjih zasijali v svoji bogati in velikokrat precej pisani prvotni podobi. V letih 2018 in 2019 je bila v okviru popotresne obnove Posočja izvedena popotresna sanacija in statična rekonstrukcija cerkve rojstva Device Marije v Policah. Pred tem so bile na objektu v letih 2016 in 2017 izvedene predhodne raziskave, pripravljen je bil Konservatorsko-restavratorski projekt (Osojnik idr., 2017), ki je predvidel nujna zaščitna konservatorsko-restavratorska dela na vseh notranjih in zunanjih ometih. Konservatorsko-restavratorska in gradbena dela so potekala sočasno.

Kratek opis objekta in historični pregled

Romarska cerkev Marijinega rojstva stoji sredi obsežne naravne police vrh grebena nad dolino Idrijce, približno 300 m jugovzhodno od vasi Police pri Cerknem. Cerkev je pravilno orientirana, v tlorisu si od vzhoda sledijo gotski rombasto obokan tristrano zaključen prezbiterij, širša pravokotna ravno krita ladja ter samostojni zvonik, ki je od glavne cerkvene fasade odmaknjen dobrih 8 metrov. Ob južni strani je cerkvi prizidana zakristija. Kompleks obkroža ograda ovalne oblike, okoli cerkve je manjše pokopališče. V notranjščini prezbiterij in slavoločno steno krasijo freske Jerneja iz Loke, ki so datirane v leto 1536 in veljajo za eno njegovih zadnjih del.

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Cerkev stoji na območju obsežnega arheološkega najdišča Police pri Cerknem – arheološko območje sv. Marija, EŠD 19974. **Številni predmeti, odkriti ob topografskih pregledih Narodnega muzeja decembra 2002 na območju arheološkega najdišča sv. Marija, potrjujejo poseljenost širšega območja Polic od mlajše železne dobe do pozne rimske dobe** (internet 1). V ustnem izročilu in literaturi, ki ga je povzela, velja prepričanje, da stoji cerkev na starem obrednem mestu, kjer naj bi nekdaj stala celo »cerkev neke druge vere«. K cerkvi so prihajale v času suše procesije, saj je bila poliška Marija »od dežja« (Flego, 2006).

V srednjeveških virih se cerkev ne omenja, prvič se omenja v vizitacijskih zapisih leta 1627 zaradi pokopališča (Höfler, 2016). Prvotno je bila cerkev podružnica cerkljanske župnije, kasneje je spadala pod župnijo Šentviška Gora, ob zaključku zadnje obnove leta 2019 pa je bila s svečano mašo ob posvetitvi opravljenih del vrnjena župniji Cerkno.

Današnja stavba je v osnovi še povsem poznogotska. Prezbiterij je bil na triosminskem zaključku osvetljen s tremi gotskimi okni, s tem da je bilo osrednje okno širše in predeljeno s stebričkom, drugi dve pa sta bili ožji in enojni. Širše gotsko okno je bilo med zadnjo obnovo najdeno tudi na južni steni cerkvene ladje. Cerkev je imela znotraj v celoti poslikan prezbiterij in slavoločno steno, medtem ko ostala ladja ni bila poslikana, temveč so jo krasili le številni posvetilni križi.

Poslikava v prezbiteriju sledi sistemu »kranjskega prezbiterija«, ki pa je za zahodni del Slovenije značilno obogaten z vplivom bližnje Furlanije. Osrednje polje zavzema Kristus Sodnik, obdajajo ga angeli muzikanti, angeli z orodji Kristusovega trpljenja ter angeli v molitvi, na obočnih kapah pa so naslikani preroki z napisnimi trakovi. Na severni steni prezbiterija je naslikan velik prizor Jezusovega rojstva, vzhodni zaključek prezbiterija pa je verjetno v celoti zavzemala vrsta stoječih apostolov. V spodnjem delu sten prezbiterija se freske niso ohranile, večji del višjih partij pa ima poslikave še skrite pod beleži. Slavolok nam na strani prezbiterija prikazuje pametne in nespametne device, na zunanji ladijski strani pa so poleg zgodbe o Kajnu in Abelu upodobljeni še dva prizora iz Kristusovega pasijona ter stoječa Mati Božja z detetom, ki pa ni delo Jerneja iz Loke, temveč gre za starejšo upodobitev. To fresko je Jernej iz Loke le obnovil, svojo poslikavo pa prilagodil njenemu okviru (Höfler, 1997).

Morda bi bilo pri poslikavi v Policah glede avtorstva bolj korektno govoriti o delavnici Jerneja iz Loke, saj je med prizori zelo očitno prepoznati vsaj dva slikarja, ki sta si delo enakovredno razdelila. Očitno je imel Jernej v Policah že nekega precej samostojnega sodelavca, ki mu je zaupal velik del oboka prezbiterija, medtem ko je slavoločna stena v celoti značilno Jernejevo delo. Zanimiva je primerjava s poslikavami v cerkvi sv. Lucije v Kravarju v Benečiji, ki so nastale v istem letu kot poliške, podobnosti pa so prav presenetljive, kot je razvidno s slik 3 in 4. Tudi v Kravarju sta opazni roki dveh različnih (istih) slikarjev in tudi tam sta si prostor na podoben način razdelila, le da je delež Jernejevih poslikav v prezbiteriju cerkve sv. Lucije še manjši kot v Policah. V Kravarju je Jernej na oboku prezbiterija poslikal samo preroke z napisnimi trakovi, preostala polja na oboku in prizori na stenah pa so delo drugega mojstra. Podobno kot v Policah je Jernej tudi tu poslikal celotno slavoločno steno. Očitno obe poslikavi, ki veljata za zadnji datirani deli Jerneja iz Loke, kažeta na postopen konec njegovega obsežnega opusa.

Zunanjščino prezbiterija je prvotno krasila dekorativna arhitekturna poslikava. Na južni steni ladje je bila kasneje naslikana velika freska s sv. Krištofom, delo slikarja Matere Božje na slavoločni steni, na severni steni pa freska s prizorom Križanja, delo sodelavca Jerneja iz Loke. Verjetno je sočasno s cerkvijo nastal tudi vitki samostojno stoječi zvonik z gotskim portalom, ki je bil prav tako po celotni višini poslikan z arhitekturno dekoracijo. V preteklosti je bila po pričevanju domačinov med cerkvijo in zvonikom obsežna lopa, pod katero so romarji spali, kar potrjujejo sledovi treh tramovnic, najdeni ob zadnjih restavratorskih posegih v zahodni fasadi cerkve (slika 14).

Sama barokizacija cerkve ni bistveno spremenila: ladja in prezbiterij sta bila nekoliko nadvišana, zazidano je bilo gotsko okno v vzhodni stranici prezbiterija, v ladji in prezbiteriju so bila vgrajena nova pravokotna okna, leta 1808 je bil postavljen nov kamnit glavni portal. Zakristije v franciscejskem katastru še ni, tako da je bila prizidana šele po letu 1822. Po pripovedovanju domačinov je bila slika sv. Krištofa z novim ometom zakrita leta 1911.

Poslikava oboka prezbiterija verjetno ni bila nikoli prekrita z beleži. Obnovljena in precej grobo preslikana je bila leta 1932. Slavoločna stena in stene prezbiterija so bile prebeljene, v spodnjih predelih pa zaradi prekomerne vlage že neznano kdaj uničene in na novo ometane.

Leta 1964 je takratni konservator novogoriške enote zavoda Emil Smole opravil prvo sondo na levi strani slavoločne stene v ladji na višini pribl. 3 m in našel ohranjene poslikave. Naslednje poletje sta restavratorja Polonca in Rafael Nemec sondo razširila in skoraj v celoti odkrila freske na slavoloku. Iz restavratorskih dnevnikov razberemo, da je bil omet na levi strani slavoloka zelo gladek, ampak krhek, na desni strani pa hrapav, zaradi česar se je belež trdovratno držal freske. Najtežje se je odstranjeval belež z rdeče barve, ki se je spojila z apnom, na obeh straneh slavoloka pa je bilo precej izredno trdovratne sige (Nemec, 1965). Na stenah prezbiterija so bile poslikave sicer še pokrite z beleži, vendar so njihov obstoj nakazovale predvsem velike poškodbe, ki jih je na ometih povzročala prekomerna vlaga v zidovih, potrdilo pa jih je tudi sondiranje. Na stenah cerkvene ladje so bili delno vidni s kasnejšimi beleži prekriti posvetilni križi.

Leta 1994 je bila zamenjana lesena kritina na zvoniku. Po potresih leta 1976, 1998 in 2004 na sami cerkvi ni bilo izvedenih nobenih konstrukcijskih ojačitev, je bil pa poleti

leta 1999 statično saniran zvonik, ki je kazal večje poškodbe predvsem v jugovzhodnem vogalu. Zvonik je bil takrat tudi na novo ometan, rekonstruirana je bila dekorativna poslikava.
Zaradi prekomerne vlage v objektu in večjih poškodb, ki so se kazale na notranjih ometih in že odkritih poslikavah, so bila v letu 2012 opravljena najnujnejša interventna konservatorsko-restavratorska dela na stenah prezbiterija in ladijskem delu slavoločne stene, s katerimi so se mehansko zaščitile propadajoče poslikave (Osojnik, 2014). Manjši predeli, ki so odstopili od podlage, so bili v celoti prekriti z gazo, večji predeli pa so že predhodno v večji meri odpadli, zato so se utrdili njihovi robovi. Istočasno so bili sanirani temelji, okoli objekta sta bila izvedena zračna kineta in primerno odvodnjavanje. Zaradi preperelosti zunanjih ometov so bili ti do višine 1 metra odbiti, na cerkvi so bili popravljeni in delno na novo izvedeni strešni venci. Vhodni portal je bil očiščen, statično saniran in restavriran. Ob posegu v zemljino so bile izvedene arheološke raziskave (Turk, Rupnik, 2012).

Popotresna obnova cerkve v letih 2017–2019

Od Državne tehnične pisarne Bovec–Kobarid smo proti koncu leta 2016 na ZVKDS, OE Nova Gorica, prejeli seznam objektov, ki so še bili predvideni za statično sanacijo v okviru popotresne obnove. Na seznamu je bila tudi cerkev v Policah. Da bi se določili in ovrednotili predvideni nujni zaščitni konservatorsko-restavratorski posegi in arheološke raziskave, ki bi se morale izvesti v primeru statične sanacije, ter v upanju, da se za njihovo izvedbo zagotovijo potrebna finančna sredstva, smo vse objekte pregledali in zanje izdelali konservatorsko-restavratorske projekte oz. mapo 3 konservatorskega načrta. Ker projektna dokumentacija za statično sanacijo objekta še ni bila izdelana, je določitev predvidenih nujnih zaščitnih posegov temeljila na dolgoletnem sodelovanju konservatorjev pri obnovi objektov v okviru popotresne sanacije, ki v večini primerov zajema utrjevanje zidov s sistematičnim injektiranjem, vgradnjo protipotresnih vezi, utrjevanje temeljev in saniranje zidov proti vlagi ipd. Natančna določitev nujnih posegov pa je bila naknadno določena ob izdelavi projektne dokumentacije, v kateri so bili specificirani predvideni statični posegi za konkreten objekt.
Pri pregledu cerkve v Policah in načrtovanju kvalitetne statične obnove, ki bi bila prijazna tudi do spomeniške substance obravnavanih objektov, sta sodelovala statika Blaž Dolinšek iz Državne tehnične pisarne in Vilko Šuligoj iz Projekta, d. d., iz Nove Gorice.

Gradbeno stanje objekta pred posegi

V ladji cerkve so bile opazne razpoke na stiku med lesenim stropom in nosilno steno, med stikom cerkve in zakristije ter na območjih odprtin (počene preklade). Večja razpoka je bila vidna v notranjosti ladje nad oknom v severni steni. Slavoločna stena je bila počena v temenu, kar je bila verjetno posledica razmikanja vzdolžnih zidov med potresom. Ostrešje cerkve je bilo v dobrem stanju. Največje poškodbe objekta so bile posledica vdora vlage in so bile najbolj vidne v spodnjih delih zidov: odpadanje ometa, razpadanje zidov, siga, alge, mrežaste razpoke ...
V zvoniku so bile zaznane večje vertikalne razpoke, ki so bile z zunanje strani prekrite z novejšim ometom. V pretekli obnovi vgrajene jeklene natezne vezi niso bile protikorozijsko zaščitene, zaradi česar jih je načela rja. Opazne so bile tudi večje poškodbe na skodlasti strehi, ki je zamakala.

Stanje ometov in poslikav

Če odmislimo statiko, je bila glavni problem cerkve talna vlaga, kar se je odražalo predvsem v notranjščini. Ometi so bili v višini od enega do približno dveh metrov močno propadli, odstopali so od podlage, tvorili so se močno izstopajoči, zelo trdi skorjasti mehurji različnega obsega (slika 5). Ponekod je odstopala samo tanka vrhnja plast ometa, drugod pa več plasti skupaj. Kjer je osrednji, vrhnji del mehurja že odpadel, so nastale poškodbe v obliki kraterjev. Teh je bilo največ in so bili najbolj obsežni v prezbiteriju in na severni steni cerkvene ladje. Povzročale naj bi jih magnezijeve soli (Matteini, 1999),[1] katerih prisotnost je bila potrjena tudi z naravoslovnimi analizami (Kavkler idr., 2018). Siga je bila na spodnjih delih sten prisotna v debelih slojih. Na stenah prezbiterija je bilo narejenih nekaj sond, največja na severni steni, kjer je bil delno viden prizor Kristusovega rojstva. Na preostalih delih sten pred začetkom del ni bilo jasno, v kolikšni meri so tu poslikave še ohranjene.
Poslikave na oboku prezbiterija in notranji strani slavoloka so bile v dobrem stanju. Po posegih iz leta 1932 ni bilo videti nobenih novejših poškodb.
Poslikave na slavoločni steni v ladji so bile po večini že odkrite izpod beležev. Odkriti so bili vsi naslikani prizori, neodkrita pa sta ostala še dekoracija samega slavoloka in spodnji del poslikave, prekrit z debelo plastjo sige. Tudi sicer so bili na površini poslikave še prisotni ostanki beležev in sige, kar je poslikavi dajalo belkast, meglen videz.
Fasade cerkve so bile prekrite z ometom grobe strukture iz leta 1911. Zelo trden in precej debel sloj ometa je bil po večini v dobrem stanju. Odpadla je večja zaplata ometa na prezbiteriju, spodnji propadli del ometa pri tleh je bil nadomeščen ob izdelavi drenaže leta 2012. Višje, na mestih izhoda kapilarne vlage iz sten, je stene cerkve obkrožala v višini 1–2 m od tal skoraj neprekinjena poškodba.
Sondiranje, ki ga je izvedel ZVKDS, OE Nova Gorica, je pokazalo ohranjenost starejših, originalnih zunanjih ometov cerkve, dekorativno poslikavo prezbiterija in dveh naslikanih prizorov. Prizor na južni steni cerkvene ladje je bil takoj prepoznan kot sv. Krištof, drug prizor z neznano motiviko pa je bil najden na severni steni prezbiterija. Sondiranje je pokazalo tudi, da so bile fasade cerkvene ladje prekrite z beljenim ometom grobe površine, stene prezbiterija pa so imele zaglajen omet.
Na podlagi sondiranj in raziskav ter ogleda objekta s statiki je bilo v konservatorsko-restavratorskem projektu za obnovo cerkve v Policah določeno, da bo treba v primeru kakršnihkoli vkopov izvesti arheološke raziskave v obliki arheološkega dokumentiranja ob gradnji. Projekt je predvidel dodatna sistematična sondiranja sten v notranjščini, odkrivanje poslikav na zunanjščini in zaščito vseh elementov, ki so del nosilne konstrukcije objekta in imajo posebno spomeniško vrednost oz. so poškodovani do te mere, da bi jih ogrozil kakršenkoli večji gradbeni poseg. Za obnovo zunanjščine so se predvidela tudi vsa zaključna prezentacijska dela (Osojnik idr., 2017).

Statična sanacija in druga gradbena dela

Popotresna sanacija in statična rekonstrukcija objekta sta zajemali sistematično injektiranje kamnitih zidov ladje, izključno z notranje strani, in zidov zakristije. Pred sondiranjem je bilo opravljeno mrežasto sondiranje ometov in beležev v cerkveni ladji zaradi ugotavljanja prisotnosti morebitnih poslikav.
Za injektiranje se je uporabljala apnena masa proizvajalca *Mapei*, ki je kemijsko in mehansko kompatibilna z apneno osnovo in ne povzroča poškodb na poslikavah. Na zatrepni steni so se izvedle poševne in nad stropno konstrukcijo vertikalne armiranobetonske vezi, zidovje cerkve se je povezalo z jeklenimi nateznimi vezmi, armiranobetonska vez se je izvedla nad slavoločno steno. Lokalno se je saniral poškodovan strop v ladji, stropnikom so se uredila ležišča z jeklenimi sidranimi pločevinami. Obstoječe ostrešje se je ustrezno pritrdilo v kamnite zidove, sicer pa se streha in ostrešje nista sanirala, saj sta bila v zadovoljivem stanju. Temelji cerkve so se podbetonirali in obbetonirali ter injektirali s hidrofobno injekcijsko maso, v globini dna temelja se je izvedla drenaža, v višini notranjih tlakov pa kemijska hidrofobna bariera. Spodnji pas ometov do višine 2 m se je na delih, kjer ni bil poslikan, odstranil, izvedel se je nov sanacijski hidrofobni omet v ladji. Po zunanjem obodu cerkve se je omet prekinil 20 cm nad tlemi, pas vidnega zidu se je globoko zafugiral.
Zvonik se je podbetoniral in obbetoniral, izvedlo se je sistematično injektiranje nosilnih zidov izključno z notranje strani, nato pa so se notranje stene obdale z armiranimi ometi, ki so se sidrali v obstoječe kamnite zidove. Obstoječe jeklene vezi so se očistile in antikorozijsko zaščitile. Po pregledu strehe se je ugotovilo, da je ta v bistveno slabšem stanju, kot je bilo prvotno ocenjeno, zato lokalno popravilo lesene kritine ni bilo smiselno. Streha zvonika se je zato v celoti obnovila z novimi macesnovimi skodlami.
Ob izkopih zemljine za sanacijo temeljev so bile opravljene arheološke raziskave ob gradnji.
Za zaščito freske sv. Krištofa na južni fasadi ladje je bil izveden nadstrešek tlorisnih dimenzij 500 x 204 cm. Konstrukcija nadstreška je iz jeklenih kvadratnih profilov, na jekleno konstrukcijo so položene lesene deske in ravna pločevinasta kritina. Streha nadstreška je enokapna, postavljena v naklonu 22°. Na severni fasadi prezbiterija, ki je izpostavljena padavinam in močnim vetrovom, se je za zaščito freske Križanja izdelala steklena zaščita dimenzij 155 x 200 cm iz kaljenega stekla z UV-zaščito, ki bo fresko ščitila tudi pred dežjem in vetrom, hkrati pa bo zaradi zadostnega odmika stekla od zidu omogočala normalno zračenje.

Restavratorski posegi

Restavratorski posegi, sproženi z gradbenimi in sanacijskimi deli, so imeli v prvi vrsti za cilj ohranjanje vseh originalnih starejših prvin ter njihovo zaščito. Ohranjali naj bi se vsi prvotni kvalitetni ometi na fasadah in v notranjščini.
Na zunanjščini sta bila predvidena odstranjevanje novejše neustrezne fasade in izvedba celotnega restavratorskega posega, tako konservatorska dela kot končna prezentacijska dela z retušo poslikav. V notranjščini pa so bili opravljeni le zaščitni posegi z najnujnejšimi prezentacijskimi posegi brez retuše in odkrivanja novih, še z ometi in beleži prekritih poslikanih površin.
Najprej je bilo treba ugotoviti obseg ohranjenih originalnih fasad in poslikav. Iz restavratorskih posegov so bile, ker gre za kasnejši, nezanimiv prizidek brez posebnosti, izključene fasade zakristije.

Sondiranje notranjščine

V notranjščini je bilo izvedeno mrežno sondiranje ometov in beležev v cerkveni ladji. S tem sta bila ugotovljena obseg in stanje ohranjenih poslikav, v spodnjih delih sten je bila določena meja, nad katero se ohranjajo prvotni ometi. Sondiranje je na stenah cerkvene ladje odkrilo sedem ohranjenih posvetilnih križev. Na vrhu sten so bili odkriti ostanki dekorativnega venca v pasovih treh barv: rdeči, rumeni in modri. Dekorativni venec se je najbolje ohranil v severozahodnem vogalu cerkvene ladje. Glede na to, da je bil najden na prvi plasti ometa, pod poslikavo na slavoločni steni, je jasno, da pripada prvotni dekoraciji cerkvene ladje in je starejši od poslikav Jerneja iz Loke. Stene ladje so bile

1 Mauro Matteini, Alberto Felici – ustna izjava. Do sedaj še ni bil najden način za njihovo odstranitev iz zidu in za sanacijo. Mehurji so zelo trdi in krhki.

gosto pokapane s kapljicami istih treh barv, za katere pa ni jasno, ali so nastale po naključju ob poslikavi dekorativnega venca in domnevnega nekdanjega poslikanega lesenega stropa, ali pa namerno kot dekoracija sten. Glede na dokaj gost in enakomeren raster kapljic po stenah se zdi verjetnejša druga možnost.
Sondiranje sten prezbiterija in slavoločne stene je odkrilo obseg ohranjenih poslikav. Izkazalo se je, da so bili zaradi soli najbolj prizadeti ometi v spodnjih delih sten že novejši, brez ostankov poslikav. Na steni za oltarjem je bila pod plastjo poslikave Jerneja iz Loke opažena še ena plast poslikanega ometa. Za kakšne vrste poslikave gre, na podlagi do sedaj odprte površine ni mogoče reči. Morda gre za starejši posvetilni križ ali pa za prvotno oltarno podobo, ki bi jo lahko naredil slikar, ki je naslikal Marijo na slavoločni steni in sv. Krištofa na fasadi.

Restavratorska dela v notranjščini

Poslikave v cerkveni ladji in na stenah prezbiterija cerkve so bile utrjene. Opravljeni so bili injektiranje z apnom, obšivanje poškodovanih robov poslikave ter kitanje poškodb. Manjši mehurji, povzročeni z migracijo magnezijevih soli, so bili zapolnjeni z apneno malto. Pri obsežnejših mehurjih se ta način ne bi obnesel, saj bi teža malte mehur potegnila s stene, vprašljiv pa bi bil tudi oprijem s podlago. Obsežnejši mehurji so bili zapolnjeni z nizko ekspanzijsko poliuretansko peno, ki je lahka, se zlahka prilagaja obliki votlih žepov, ima dober oprijem, v odsotnosti UV-žarkov ima dolgo trajanje, z vnosom topila pa je lahko odstranljiva in omogoča drugačne rešitve v prihodnosti. Nižji kraterji so bili pokitani, robovi bolj izstopajočih pa so bili narezani in potisnjeni k steni, na katero so bili pritrjeni z apneno malto.
S poslikav slavoločne stene in posvetilnih križev v ladji so bili mehansko, s skalpeli odstranjeni beleži in njihovi ostanki. Pri odstranjevanju ostankov sige v spodnjih delih sten so bili v pomoč tudi premi brusilniki z brusnimi kamni in krtačkami. Odkrite poslikave so bile obdelane z oblogami 5-odstotnega amonijevega karbonata. Izpiranje je bilo zaradi šibke barvne plasti opravljeno prek japonskega papirja. Barvna plast, v višjih predelih izprašena in brez veziva, pa je bila fiksirana z 1,5-odstotnim amonijevim kazeinatom in več nanosi *nanokalka*.[2]
V spodnjem delu sten prezbiterija in slavoločne stene so bili v nivoju plasti prvotnega ometa izvedeni novi apneni ometi, ki so bili prebeljeni v barvi prvotnega opleska. Ta je bil uporabljen tudi za obarvanje sten prezbiterija s še neodkrito poslikavo. Poretuširane so bile poškodbe na posvetilnih križih v ladji in v severozahodnem kotu je bila prezentirana sonda s prvotnim dekorativnim vencem na vrhu sten ladje.

2 Nanorestore (C.T.S.s.r.l). Disperzija apna v izopropanolu. Z njim se v dotrajane puste omete ponovno vnaša apneno vezivo, da se jih s tem sanira.

Odkrivanje originalnih ometov na zunanjih fasadah

Odstranjevanje novejše plasti ometov s fasad cerkvene ladje je bilo zaradi njihove debeline in trdnosti opravljeno s pnevmatskim kladivom, medtem ko je bilo na stenah prezbiterija, ki ima gladke in poslikane fasade, to delo opravljeno ročno, s kladivi in dleti. Sproti so se izvajala najnujnejša utrjevalna dela.
Izkazalo se je, da so dobro ohranjeni prvotni ometi južne in severne fasade cerkvene ladje, medtem ko je bilo na največji zahodni fasadi ohranjenih le nekaj zaplat. Tu so bile najdene tudi tri zazidane pravokotne niše. Glede na njihovo mesto in ustno izročilo se domneva, da gre za tramovnice strehe nekdanje lope med cerkvijo in zvonikom (Flego, 2006).
Prepoznane so bile tudi prvotne višine sten cerkvene ladje in prezbiterija in na zahodni fasadi ladje prvoten naklon strehe. Ostrešje je bilo namreč v preteklosti že zamenjano. Prvotna streha je imela sleme v približno isti višini kot sedanja, nižje pa so bile vzdolžne stene ladje. Imela je torej precej bolj strm naklon.
Na prezbiteriju so do višine 1–1,5 m od tal originalni ometi v celoti propadli, višje pa so bili dokaj dobro ohranjeni. Razen na jugovzhodni stranici, ki je bila gosto natolčena, so bile drugod le manjše posamezne poškodbe in vrzeli. Ometi originalne fasade s poslikavami so bili prekriti z več plastmi beležev. Poškodbe, nastale zaradi delovanja padavin, so se kazale predvsem kot abrazije in izpranost barvne plasti in beležev. Dekorativna poslikava prezbiterija v opečno rdeči barvi je obsegala šivane robove na vogalih, dekorativni rastlinski venec na vrhu stene in obarvane špalete oken z naslikanimi fugami. Narejena je bila v fresko tehniki. Glede na odsotnost starejših slojev ometa in na podobnost z dekoracijo v notranjščini prezbiterija, ki je prav tako na prvotnem sloju ometa (pod plastjo z poslikavami Jerneja iz Loke), domnevamo, da gre za prvotno arhitekturno dekoracijo cerkve, narejeno ob njeni izgradnji.
Širše gotsko okno na vzhodni stranici prezbiterija je bilo pred posegi zazidano. Ker bi bil prezbiterij brez njega, kot pomembnega arhitekturnega elementa, videti pomanjkljivo, smo se odločili za njegovo polovično odprtje in prezentacijo kot niše na fasadi. Pri odpiranju okna se je pokazalo, da je originalno krogovičje še na prvotnem mestu, vsi kosi stebrička, ki je po sredini delil okno, pa so bili najdeni med gradbenim materialom, s katerim je bilo okno zazidano. Najdeni so bili še drobci prvotne zasteklitve.[3] Okno je bilo rekonstruirano v prvotni obliki in zazidano s kosi porobetona, oblikovanimi po meri in v obliki odprtin.
Odstranitev kasnejših ometov je potrdila domnevo, da poslikava na južni steni cerkvene ladje prikazuje sv. Krištofa. Po odstranitvi ometov se je prikazala v medlem obrisu, z odstranjevanjem ostankov malte pa se je slika jasnila. Celopostavna upodobitev sv. Krištofa z Jezuščkom na desni rami in ozelenelo palico v levi roki je postavljena v obokano nišo. Krištof kot navadno stoji razkoračen sredi reke, z desno roko za pasom, na katerega je obešena torbica. V manjših nišah vrh stebrov ob straneh osrednje niše sta bili upodobljeni dve, le delno ohranjeni svetnici. Po atributih, meču in polomljenem zobatem kolesu je prepoznavna le sv. Katarina na levi strani. Na Krištofovih ramenih sta upodobljena angela z lutnjo; desni je, zanimivo, brez kril. Kot je pri upodobitvah sv. Krištofa običajno, je v reki med njegovimi nogami upodobljena mitološka riba Faronika, ki predstavlja naravno silo. Okrog plavajo ribe, rak, zaradi poškodb komaj prepoznavna žival z lovkami ter dve raci in verjetno čaplja. Na obeh bregovih sedita zaradi slabe ohranjenosti komaj še razpoznavna moška, sodeč po palicah v rokah, ribiča. Levi ima dvignjeno roko, zdi se, da v njej drži majoliko, s katero nazdravlja kolegu na drugi strani reke. Nekoliko višje na desni strani je izza Krištofovega plašča upodobljen puščavnik s svetilko v roki in cerkvijo v ozadju. Po legendi o sv. Krištofu ta puščavnik pri samem prehodu svetnika čez reko ni bil navzoč, vendar naj bi ga slikarji redno vključevali v prizor, kot pomoč pri določitvi časa dogodka – ta naj bi se zgodil ponoči, na kar opozori puščavnikova svetilka (Golob, 1982: 21). Na nasprotni strani je v ozek prostor med Krištofovim plaščem in stebrom stisnjena stoječa figura, ki s strelnim orožjem meri v rogato žival nad seboj (slika 10).
Glede na enake uporabljene barve, sorodnost obrazov in drugih podrobnosti ter na enak okras Krištofove obleke in zunanje strani plašča Marije z detetom na slavoloku cerkve v notranjščini obe poslikavi lahko pripišemo istemu avtorju iz zgodnjega 16. stoletja (Höfler, 1997: 117).
Freska sv. Krištofa je prvotno merila približno 5 m v višino in 3,7 m v širino. Uničenih je bilo približno 40 cm poslikave pri tleh in 40 cm na desni strani zaradi novejšega, širšega okna. Poslikava je bila v spodnjem delu zaradi delovanja vlage le delno ohranjena. Višje je bil omet poslikave po celotni površini gosto natolčen. Natolčenine so bile v spodnjem delu večje in redkejše, proti vrhu pa vedno manjše in gostejše. Na poslikavi ni bilo najdenih ostankov beležev. Kaže, da poslikava ni bila nikoli prekrita z njimi, temveč le neposredno z ometom kasnejše fasade. Zelo različna je bila ohranjenost barvne plasti. Ta je bila v spodnjem delu spolverizirana in prekrita s številnimi drobnimi poškodbami. V osrednjem delu je bila zelo dobro ohranjena, zdrava, z nasičenimi barvami, ki so se delno brisale. Stanje je bilo spet slabše v zgornjem delu, kjer je bila barvna plast delno oluščena in spolverizirana, imela je številne drobne poškodbe, barve so bile medle. Levi zgornji vogal freske je bil izpran do ometa. Zaradi izpiranja razširjene, prvotno ozke razpoke v ometu so segale tudi nižje v bolje ohranjeno poslikavo (slika 10).
Desno od sv. Krištofa, nad sedanjim pravokotnim oknom, je bil najden vrh prvotnega gotskega okna, katerega širina in kosi stebrička, najdeni med gradbenim materialom, s katerim je bila odprtina zazidana, kažejo na to, da je bilo okno dvodelno, s stebričkom na sredini. Fragment okna je bil prezentiran le kot iz ometa fasade rahlo reliefno izstopajoč obris. Za tako prezentacijo smo se odločili zaradi podporne konstrukcije novega zaščitnega nadstreška nad fresko sv. Krištofa, ki jo je bilo treba upreti v steno ravno na mestu ostanka okna.
Za novo odkrito fresko na severni steni prezbiterija se je izkazalo, da prikazuje Križanje. Po stilnih značilnostih jo lahko pripišemo sodelavcu Jerneja iz Loke.[4] V sredini prizora je Križani, ob njem letita dva angela, ki v kelihe prestrezata kri iz njegovih ran. Napis na napisnem traku vrh križa se ni ohranil. V spodnjem delu prizora so tri postave. Na levi in desni stojita dve postavi, podnožje križa objema napol klečeča ženska figura, verjetno Marija Magdalena. Marija, Jezusova mati, stoji na levi strani, sključeno v gesti žalovanja, na desni strani pa je kot svetlolasi mladenič upodobljen sv. Janez Evangelist. V spodnjem delu slike je znotraj naslikanega okvirja, ki obroblja prizor, delno ohranjen zbledel, še nepojasnjen napis.
Tako kot sv. Krištof tudi Križanje ni bilo nikoli prekrito z beleži, temveč le neposredno s kasnejšo fasado. Medtem ko je bila preostala fasada večkrat prebeljena, sta freski ostali vidni do preplastitve z ometi zadnje fasade. Križanje, sicer v celoti ohranjeno, kaže sledove dolge izpostavljenosti atmosferskim vplivom. Zaradi dolgotrajnega izpiranja dežja so bile razpoke v ometu, ki so sicer nastale že ob sušenju poslikave ob sami izvedbi, močno razširjene. Iz drobnih lasastih razpok so se razširile v 0,5 cm in več debele razpoke. Barvna plast je bila sicer dobro ohranjena in se je le delno brisala.

Restavriranje zunanjih ometov

Prvotni ometi fasad so bili očiščeni, opravljeni so bili injektiranje votlih predelov, kitanje drobnih poškodb in dopolnjevanje manjkajočih predelov. Rekonstruirani so bili ometi celotne zahodne fasade ladje. Ob rekonstrukciji ometov so bile v nekoliko poglobljenem nanosu prikazane domnevne lege nekdanjih tramovnic lope. Za rekonstrukcijo manjkajočih delov fasade je bila izbrana apnena malta z živim apnom.[5] Na očiščeni zid se je malta nanašala v treh slojih: najprej hrapav nabrizgan omet, nato so bili izravnani globoki predeli, sledil je zaključni sloj. Pri ometih na ladji cerkve se je poskušala imitirati groba površina originalne fasade cerkve. To je bilo doseženo s tem, da so se z zidarsko

3 Najdeni drobci so bili vsi prosojni, neobarvani. Premer posameznega okroglega segmenta je bil okoli 8,5 cm.

4 Poslikavo je izvedel slikar, ki je na osnovi stilnih značilnosti prepoznan kot sodelavec Jerneja iz Loke.

5 Uporabljeno je bilo živo apno iz Vitanj (Ravnak Anton – Dopolnilna dejavnost na kmetiji, Kovaška cesta 8, Vitanje). Pesek je bil lokalen iz bližnjega peskokopa v Bukovem (Razpet, d. o. o., Bukovo 67, Cerkno). Za nasvete pri pripravi ometa iz živega apna se zahvaljujemo Jožetu Drešarju, Gnom, d. o. o.

žlico delno izravnani ometi ob pričetku strjevanja prebelili z apnenim beležem, nanesenim s čopičem. Ob ponovnem namočenju se je vrhnja plast spet zmehčala in se pustila delno oblikovati. Nastala je valovita grbančasta površina, na kateri so se poznale poteze zidarske žlice. Obdelava s čopičem je nepravilnosti zmehčala, delno zgladila površino, zalite in zaprte so bile drobne luknjice. Na površine fasad so bile nanesene štiri plasti beležev. Kasnejša nadzidava ladje in prezbiterija je bila obdelana enako kot rekonstruirane originalne fasade z grobim ometom, le zaradi prepoznavnosti v nekoliko drugačnem rastru površine.

Pri prezentaciji poslikanih fasad prezbiterija se je zaradi njihove izpostavljenosti vremenskim vplivom in posledičnega propadanja pojavila dilema, ali prezentirati originalno fasado, ali pa jo preplastiti z apnenim ometom in izvesti rekonstrukcijo naslikane dekoracije. Odločili smo se za prvo možnost, s tem da se uporabijo vsa razpoložljiva zaščitna sredstva. Originalni ometi fasad so bili najprej dvakrat tretirani z nanokalkom, nato pa je bil opravljen postopek utrjevanja barvne plasti poslikanih delov fasade z amonijevim karbonatom in barijevim hidroksidom. Gre za postopek, razvit v Italiji v šestdesetih letih 20. stoletja. Barijev hidroksid je kemična snov, ki se uporablja predvsem za stabilizacijo žvepla in utrjevanje stenskih poslikav na osnovi apna. Na površino se nanaša v vodni raztopini z oblogo v celulozni pulpi in deluje na podlagi kemičnega procesa, v katerem se kalcijev sulfat, ki je neobstojen, spremeni v netopen barijev sulfat. Navadno se uporablja po predhodnih oblogah amonijevega karbonata, ki odstrani odvečen »gips« (it. gesso) in blokira ostanke solfatov. Primeren je le za poslikave, realizirane v tehniki prave freske s pigmenti, neobčutljivimi za baze. Poslikavo s proteinskim – živalskim vezivom barij utrdi, uniči pa vezi pri poslikavi z rastlinskim vezivom. Pri nepravilni uporabi barijev hidroksid na površini poslikave lahko nepovrnljivo pobeli. Zagotavlja paropropustnost ometov in poslikav ter odpornost proti žveplu. Po potrebi je postopek mogoče ponoviti. Omejitev je prisotnost magnezijevih soli, ki mora biti nižja od 2 %.

Pri nas je bila ta metoda po nekaj manjših poskusih uporabljena prvič. Na poslikavah prezbiterija je bila v letu 2018 organizirana delavnica o barijevem hidroksidu, ki sta jo organizirala Restavratorski center in Društvo restavratorjev Slovenije, vodila pa jo je Claudia Ragazzoni, restavratorka iz Trsta.

Za retušo poškodb v barvni plasti in rekonstrukcijo manjkajočih delov poslikave so bili uporabljeni pigmenti z 2-odstotnim amonijevim kazeinatom kot vezivom. Retuša je bila izvedena v lazurah v več nanosih. Manjkajoči deli arhitekturne dekoracije so bili rekonstruirani v isti tehniki. Sledilo je fiksiranje retuše z drugim nanosom barijevega hidroksida. S tem je ta postala nereverzibilna in trajna.[6]

Utrjevanje in zaščita dekorativnih poslikav prezbiterija sta se zaključila z amonijevim oksalatom, nanesenim z oblogami celulozne pulpe.[7]

Odtolčen originalni napušč, izdelan iz kosov lehnjaka, ki je na vrhu zaključeval poslikano fasado prezbiterija, je bil nakazan kot reliefno izstopajoč pas v grobem ometu, obarvanem v fresko tehniki v svetlejših barvah glede na ohranjene arhitekturne člene. Enaka rešitev je bila uporabljena tudi na talnem zidcu prezbiterija. Poslikava na rekonstruiranih okenskih policah je bila tudi izvedena v fresko tehniki, le na gladki površini.

Zvonik, katerega fasade so bile obnovljene v letu 1999, je imel ohranjen gotski šilasto zaključen portal iz lehnjaka, na katerem so bili skromni ostanki arhitekturne poslikave. Zaradi izpostavljenosti vremenskim vplivom smo se odločili, da ga zaščitimo s plastjo ometa. Na podlagi ohranjenih fragmentov in po zgledu ostalih arhitekturnih poslikav na cerkvi je bila na njem narejena rekonstrukcija poslikave v fresko tehniki.

Poslikavi sv. Krištofa in Križanja

Po odstraniti ometov s površin poslikav je bilo opravljeno fino mehansko čiščenje s skalpeli, s katerim so bili odstranjeni ostanki malte. Vzporedno so tekla utrjevalna dela: obšivanje poškodovanih robov ometov poslikave, injektiranje votlih in odstoplih predelov ter utrjevanje šibkih, dotrajanih ometov z nanokalkom.[8] To je bilo nujno v zgornjem in predvsem v spodnjem delu poslikave sv. Krištofa, kjer je bila zaradi krhkosti originalnih ometov dokončna odstranitev ostankov malte možna šele po utrditvi. Najbolj prizadeti predeli so zahtevali tudi osem ponovitev postopka. Nanokalk v dotrajane omete prodira tudi več centimetrov globoko in jih utrdi globinsko, težko pa se z njim doseže stabilna, trdna barvna plast na površini, kar je bilo doseženo s kasnejšo obdelavo z barijevim hidroksidom. Na osrednjem delu sv. Krištofa in na Križanju, kjer so bili ometi v boljšem stanju, so bili opravljeni trije nanosi nanokalka.

Sledile so obloge amonijevega karbonata in izpiranje površine poslikave. Nato je prišlo na vrsto kitanje drobnih poškodb, predvidenih za retušo. Po dobrih rezultatih na dveh manjših poskusnih vzorcih smo se odločili za utrjevanje barvne plasti poslikav z barijevim hidroksidom. Ta se je namreč še vedno delno brisala – predvsem rdeča in oker barva, kar zaradi izpostavljenosti poslikave na fasadi ni bilo sprejemljivo. Po nanosu barija so se z večkratnim izpiranjem odstranile soli, ki so se pojavile na površinah obeh poslikav.

Sledila je retuša poškodb. Pri tem je bilo zaradi različne situacije treba na poslikavah uporabiti različen pristop. Freski Križanja dokaj homogena mreža razpok ni bistveno zmanjšala berljivosti. Kitanje razpok in retuša v prvotno stanje se nista zdela smiselna, saj bi s tem poslikava izgubila pristnost. Postopek bi bil zamuden in zahteven, izkupiček pa skromen. Odločili smo se za ohranjanje poškodovanega stanja poslikave, s tem da so se svetle, bele razpoke z rahlim toniranjem v smislu nevtralnega tona naredile manj vpadljive.

Povsem drugačna pa je bila zgodba pri freski sv. Krištofa, ki je imela več tipov poškodb. Najbolj moteč je bil raster nakljuvanin in manjših vrzeli. Ta je bil po celotni površini freske razporejen dokaj enakomerno, s tem da so bile v spodnjem delu poškodbe precej večje in globlje, v zgornjem pa manjše. Barvna plast je bila ohranjena zelo neenakomerno. V osrednjem delu je zelo dobro ohranjena in zelo močna, v zgornjem in spodnjem delu pa sta ohranjenost in intenzivnost barvne plasti slabši. Poleg tega so bile na poslikavi, predvsem v zgornjem in spodnjem delu, številne drobne poškodbe. V zgornjem levem kotu pa je bila barvna plast povsem izprana, tako da je tam ostal le gol omet. V freski je bilo tudi več večjih vrzeli, neprimernih za retušo. Največja je prizadela celoten manjkajoči spodnji del poslikave.

Poslikava je na fasadi in vidna od daleč ter pomembno zaznamuje arhitekturo cerkve. Zagotoviti je bilo treba homogen in naraven videz slike in povrniti njeno berljivost.

Z retušo drobnih poškodb z lazurami barv je bilo stanje poslikave v zgornjem in spodnjem predelu poslikave približano temu v osrednjem delu. Nakljuvanine, ki so najbolj prizadele telo slike, so bile najprej poskusno retuširane v svetlejšem tonu. Izkazalo se je, da to ni dovolj. Raster poškodb bi s tem postal res nekoliko manj vpadljiv, a bi bil še vedno moteč. Za najboljšo rešitev se je izkazalo prilagajanje retuše nakljuvanin lokalni ohranjenosti in intenzivnosti barv. Kot najustreznejša je bila izbrana retuša s črticami. Že v originalni poslikavi so dokaj izrazite poteze slikarja. Tem je sledil raster črtic retuše. Kjer usmerjenost potez poslikave ni bila tako jasna, smo izbrali vertikalen raster. Z večkratnim nanosom barve s črtkanjem je bilo tudi najlažje doseči intenzivnost barv originalne poslikave. Poretuširane so bile tudi nekatere večje poškodbe. Največja je bila velika vrzel v spodnjem desnem delu Krištofove obleke. Pri retuši poškodb na obleki je bila rekonstruirana le oker podlaga z modelacijo gub blaga. Izziv je bila prezentacija nekaterih figur, ki so bile deloma dobro ohranjene, deloma pa povsem uničene, kot npr. Jezusova halja, katere barvna plast je bila v spodnjem delu dobro ohranjena, v zgornjem pa uničena. Z retušo ustvarjen mehek, organski prehod med obema skrajnostma je figuri povrnil celovitost. Podobno je bilo pri angelu na desni rami Krištofa, čigar trup, odlično ohranjen v spodnjem delu, je bil prekinjen z veliko vrzeljo, glava pa je bila le delno ohranjena. Glava sv. Katarine na levem stebru ob robu poslikave je bila izgubljena v predelu z izprano barvno plastjo v zgornjem levem kotu. Z ohranjanjem mreže razpok v ometu in njihovo imitacijo na pokitanih nakljuvaninah je bil dosežem naraven, mehek prehod med manjkajočim in ohranjenim delom svetnice. Precej poškodovan je bil tudi Krištofov obraz. Z dopolnitvijo manjkajočih delov oči, obrvi in nosu mu je bila povrnjena celovitost, kar upravičuje ključna vloga tega dela v poslikavi.

Poseben izziv je bila retuša strelca na levi strani. Poškodbe so prizadele nekatere ključne dele: zgornji del trupa z glavo, rokami in osrednjim delom orožja, vrh cevi ter sprednje noge živali. Ohranjeni detajli ob robu poškodb so omogočali rekonstrukcijo oblike puške, položaja rok ter dolžine cevi puške. Manjkajoči detajli so bili retuširani z retušo s črtkanjem v poteku barvnih polj, brez podrobnosti. Tak pristop je v tem primeru, poleg celovitosti poslikave, upravičevala tudi dokumentarna vrednost detajla. Gre namreč za najstarejšo znano upodobitev rabe ognjenega orožja pri nas (Lazar, Jazbec, 2019: 203–218).

Manjkajoči spodnji del in večje vrzeli so bili prezentirani kot poškodbe in pokitani pod nivojem z ometom zaribane površine. Barva ometa je bila prilagojena barvi originalnega ometa freske, vidnega v zgornjem levem kotu z izprano barvno plastjo. Manjkajoči desni del poslikave ob oknu je bil obravnavan kot del fasade.

Z opravljeno estetsko prezentacijo je bila poslikavi povrnjena enovitost, odpravljene so bile najbolj moteče poškodbe. Mogoče je doživljanje poslikave kot celote, z njenimi kompozicijskimi lastnostmi, barvnimi razmerji, drobnimi dokumentarnimi detajli. Poškodbe, ki jih ni bilo mogoče sanirati, so nemoteče vključene v celoto.

Ostale najdbe

Ob delih v cerkvi je bilo najdenih še nekaj drobnih najdb, ki nam omogočajo boljši vpogled v zgodovino cerkve.

Sedanji kamnit poznobaročni oltarni nastavek je vsaj drugi na tem mestu. Prenesen je bil iz opuščene cerkve sv. Marije Magdalene v Dabru na Šentviški Gori.[9] Marijin kip v niši je skromno delo iz 19. stoletja. Ostanki prejšnjega oltarja so še prisotni v cerkvi. Na vrhu oltarja so trije leseni kipci, svetnik škof in dva angela. Površno so prekriti z belim premazom, pod katerim je delno vidna starejša polihromacija. V leseni konstrukciji nad stopnicami na pevski kor so sekundarno uporabljene deske s polihromacijo. Poleg kipa Marije z detetom, ki je danes na Šentviški Gori,[10] so to ostanki

6 Nereverzibilnost retuše in rekonstrukcij upravičuje izpostavljenost poslikave in dejstvo, da gre za manj pomembno dekorativno, arhitekturno poslikavo. Na figurativnih poslikavah, dodatno zaščitenih z nadstreškom in steklom, retuša ni bila fiksirana.

7 Gre za zadnjo stopnjo postopka, začetega z oblogami amonijevega karbonata in barijevega hidroksida. Amonijev oksalat zagotavlja dodatno zaščito proti padavinam, kislinam, žveplu. Barve poslikave naredi bolj intenzivne.

8 Nanašal se je s pršenjem. Neposredno po nanosu nanokalka se je površina poškropila z vodo. S tem se po opažanju avtorja zmanjša tveganje za pobelitev, karbonacijo apna na površini poslikave. Kratkotrajen nanos vode zadostuje, da alkohol ne izpari prehitro.

9 Ustni vir: Stane Makuc, Police 13.

10 Sedaj v cerkvi sv. Vida na Šentviški Gori (Jazbec, 2007). Poleg stilnih podobnosti z Marijinim kipom in leseno plastiko oltarjev na Dvoru pri Preddvoru o skupnem izvoru kipa Marije ter kipov svetnika in angelov pričata dve plasti polihromacije, primerljivi na vseh kipih.

starejšega lesenega baročnega oltarja. Nastal je verjetno v tridesetih ali štiridesetih letih 17. stoletja in je delo ljubljanske rezbarske delavnice, ki je z več manjšimi stranskimi oltarji opremila npr. cerkev sv. Petra v Dvoru pri Preddvoru (Jazbec, 2001). K ostankom prvotnega baročnega oltarja bi lahko spadala tudi kosa oblikovanega in obarvanega lehnjaka, najdena vzidana kot spoliji ob sedanjem vhodnem portalu. Morda gre za ostanka dekoracije nekdanje menze.
Med obnovitvenimi deli sta bili najdeni tudi dve smrekovi deski, ki sta bili žagani, površine so bile zglajene, na dveh stranicah obeh kosov je bilo opaziti vreze v les, utor za vezavo in polihromacijo. Na licih desk je bila naslikana črno-rdeča šahovnica, na eni od ožjih, stranskih stranic pa so na beli podlagi ostanki rdeče barve in modrega azurita. Na večji deski je poleg utora opazen segment krožnega vreza v les, ki določa obliko barvnemu polju s šahovnico. Glede na zarisano okroglino in obarvanje z modro barvo na ožji stranici deske lahko sklepamo, da je bila deska vgrajena v neko obarvano leseno konstrukcijo tik ob niši. Z upoštevanjem loka zarisane okrogline in ob predvidevanju, da je bila polkrožno zaključena, je bila niša široka približno 32 cm, visoka pa najmanj 82 cm. Glede na nepobarvane površine in vreze v les je nišo obrobljal dodan izstopajoči okvir. Izstopajoča horizontalna ramena ob prehodu v okroglino ob vrhu so segala tudi v globino niše (slika 14). Glede na opisano se zdi najbolj verjetno, da sta obarvana kosa desk skromna ostanka nekdanjega oltarnega nastavka v cerkvi. Vzorec šahovnice pa ni značilen za ljubljansko delavnico, ki je izdelala oltar v 17. stoletju. Gre morda za fragmenta prvotnega oltarja iz 16. stoletja?
Na podstrešju je na levi strani slavoločne stene vzidan kamen s fragmentom fresko poslikave rdečih kvadratkov na svetlo oker podlagi, ki je verjetno del patroniranega ornamenta stopničastega kvadratastega motiva poslikanega okvirja. Na Slovenskem se je pojavil okoli leta 1400 v stenskem slikarstvu furlanske smeri (Praprotnik 1973: 60–61).
Vsa restavratorska dela je pod vodstvom mag. Andreja Jazbeca izvedla ekipa Restavratorskega centra RS v sestavi Maja Cingerle, Katja Guček, Eva Sirk, Petja Berginc, Saša Snoj, Zoran Flander in Primož Fučka.
Streha zvonika je bila na novo prekrita z macesnovimi skodlami. Dela je izvedlo Skodlarstvo Bohinj Nejc Dijak, s. p., iz Bohinjske Bistrice, ki se je izredno hitro odzvalo na našo prošnjo po izvedbi, saj prvotno menjava celotne kritine ni bila predvidena.
Ob izkopih zemljine zaradi izvedbe sanacije temeljev ter za potrebe izvedbe drenaže in odvodnjavanja je bil v kulturnovarstvenih pogojih zahtevan arheološki nadzor ob gradnji, ki ga je izvedel arheolog Miha Mlinar iz Tolminskega muzeja.
Gradbena dela je izvedel GRAS, d. o. o., pod vodstvom Matevža Berganta, odgovorni nadzornik s strani Državne tehnične pisarne Bovec–Kobarid je bil Zvone Hren. Konservatorski nadzor s strani ZVKDS, OE Nova Gorica, so opravljali Minka Osojnik, Brane Zbačnik, Marta Bensa in Katja Kosič.
Ob odločitvah glede restavratorskih rešitev in končne prezentacije se je na objektu večkrat sestala Delovna skupina za varstvo in ohranjanje stenskih poslikav ZVKDS, z ogledom in dragocenimi nasveti je pomagala tudi kolegica konservatorka dr. Nika Leben iz kranjske enote ZVKDS.

Sklep

V zadnjih letih smo se konservatorji in restavratorji, ki delujemo na območju Posočja, vse pogosteje srečevali s problemom pomanjkanja finančnih sredstev za zaščitne konservatorsko-restavratorske posege, medtem ko se je popotresna obnova nadaljevala. Posledice tega pomanjkanja so bile na žalost vidne na terenu, ogrožene so bile predvsem stenske poslikave. Po drugi strani pa smo bili konservatorji zaradi istega razloga prisiljeni v omejevanje s statičnega vidika pomembnih gradbenih posegov, kar objektom prav tako ni bilo v nikakršno korist (Osojnik, Jazbec, 2017a, 2017b).
Z izboljšanjem sodelovanja med konservatorsko in gradbeno stroko ter predvsem s hitrim odzivom pri pripravi načrtov obnove in z opravljenimi raziskavami se je v primeru cerkve rojstva Device Marije v Policah omogočila kvalitetna statična obnova, ki spoštuje materialno substanco objekta in pripomore k ohranitvi vseh bistvenih spomeniških sestavin. Marijina cerkev v Policah spada med tiste objekte, ki so bili že pred potresom v izredno slabem stanju. Zaradi svoje odmaknjenosti je bil objekt dolga leta slabo vzdrževan, glede na demografsko situacijo tega območja pa bi bilo tudi v prihodnje težko pričakovati večje finančne vložke, ki bi pripomogli k obnovi kulturnega spomenika. S popotresno obnovo se je objekt ne samo statično konsolidiral, temveč so se tudi sanirali glavni vzroki propadanja. Vse kvalitetne arhitekturne in umetnostnozgodovinske prvine v notranjščini so se ohranile in konservirale, na zunanjščini pa je bila poleg odkrivanja in konserviranja opravljena tudi celovita estetska prezentacija.
V Sloveniji se zadnja desetletja soočamo s pospešenim propadanjem stenskih poslikav na zunanjščinah, pri čemer je jasno, da bitko izgubljamo. Ker zadovoljive rešitve ni bilo na vidiku, smo se konservatorji in restavratorji zatekli k alternativam: snemanje poslikav in prestavitev v varno okolje, izdelava kopij, prekrivanje originalnih poslikav … (Bogovčič, 1985: 93–97). Omenjene rešitve res omogočajo preživetje originalnih poslikav, vendar hkrati prinašajo vrsto drugih problemov, ki v primeru snetja originala in izdelave kvalitetne kopije na prvotni lokaciji niso omejeni samo na najpogostejšega – finančnega. Na vprašanje, kam z originalom, je zaradi njegovih dimenzij morda najtežje odgovoriti ravno v primeru poslikav z velikanom svetim Krištofom. Tudi ko se najde dovolj velik prostor za originalno poslikavo, ki je po možnosti celo prostorsko umeščen v bližino prvotne lokacije, se lahko pojavi vsebinska zagata, ko se npr. freska s sv. Krištofom, ki naj bi vernika varovala pred nenadno smrtjo, znajde v mrliški vežici nad mrtvaškim odrom (Zoubek, 2017: 280–281). Ta primer nas pripelje do glavnega problema pri snemanju oz. prekrivanju poslikav, ki je vsebinske narave. Stenska poslikava v svojem bistvu ni premičen predmet, narejena je bila za točno določeno mesto, predvsem pa je bila narejena zato, da jo gledamo, da nam predaja svoje sporočilo in da v njej uživamo.
Zaščitni nadstreški niso nova konservatorska rešitev, čeprav jim spomeniško varstvo v preteklosti ni bilo vedno naklonjeno, saj so velikokrat estetsko močno okrnili podobo zunanjščin zaščitenih objektov (Golob, 1982: 30). Ponekod so bili po odkritju poslikav predvideni ukrepi za fizično varovanje pred meteornimi vodami in zaščito pred UV-žarki, a kasneje niso bili izvedeni (Leben, 1999: 9). Pri poslikavah zunanjščine na poliški cerkvi smo z restavratorskimi metodami utrjevanja in konserviranja, novimi za slovenski prostor, ter s fizično zaščito poslikav z nadstreškom in stekleno ploščo poskusili najti rešitev za dolgotrajen obstoj originalnih poslikav na njihovem prvotnem mestu. Nobena rešitev ni idealna, vsaka ima svoje dobre in slabe plati in je neke vrste kompromis med idealno estetsko rešitvijo in zaščito, ki naj omogoči dolgotrajno ohranitev stenskih poslikav. To velja tudi za nadstrešek in zasteklitev, ki sta seveda z estetskega vidika in vidika pristnosti tujka.
Poliška cerkev je tretja v sklopu popotresne obnove, pri kateri so se ohranjale originalne fasade in so restavratorji prevzeli njihovo sanacijo (Osojnik, Jazbec, 2017a, 2017b). Stroka že dolgo opaža neustreznost na novo izdelanih fasad na spomenikih (Deanovič, Kavčič, 2004). Dandanes imajo zidarji drugačen način dela, kot so ga imeli stari mojstri. Nanosi ometov so debelejši, njihova zaključna obdelava je drugačna, problematični so tudi stiki novih ometov z vidnimi kamnitimi deli stare fasade, npr. kamnitimi vogelnimi kamni. Drugačni so tudi materiali. Poleg cementa, ki kot osnovna sestavina ali dodatek malti omogoča debelejše nanose in večjo trdnost, malti pa da nezgrešljiv tuj siv ton, so tu še sodobne, najpogosteje silikatne barve. Te imajo drugačno površino, drugačen lesk od originalnega apna. Drugače se starajo – s staranjem potemnijo in drugače propadajo, drugače se luščijo. Znaki propada apnene fasade niso tako moteči, ker so njej lastni, zanjo značilni. Znaki propada modernih materialov na zgodovinskih objektih pa so dvakrat moteči – kot znak propada in kot neznačilen, tuj znak propada. Z izdelavo nove fasade z modernimi materiali stavba izgubi velik del svoje pristnosti in tudi estetske vrednosti. Zato je nujno ohranjanje originalnih apnenih fasad in njihovo restavriranje v avtentičnih materialih (Kavčič, 2013). Zaradi pomanjkanja usposobljenih izvajalcev, nezaupanja gradbenikov v tradicionalne materiale in njihove nepripravljenosti prilagajanja delovne rutine ter neusposobljenosti za restavriranje in izvedbo tradicionalnih apnenih fasad to delo prevzemajo restavratorji. Vendar so ustrezno ohranjene in restavrirane fasade na zgodovinskih objektih še vedno prej izjema kot pravilo. Poliška fasada je tako eden od poskusov ohranitve in restavriranja apnene poslikane fasade.
Kljub izrazitemu napredku v pristopu k statični sanaciji objektov kulturne dediščine, ki je bil opažen pri obnovi cerkve v Policah, pa moramo opozoriti še na en problem, ki se pri tovrstnih obnovah konstantno ponavlja. Časovnice projektov, financiranih z državnimi sredstvi, so neustrezne. Po injektiranju in sanaciji vlage bi morala dela na objektih čakati do osušitve sten, šele nato bi se izdelale fasade in sanirali ometi v notranjščini.
Sodeč po hudih poškodbah ometov in zidov cerkve v Policah, ki so bile zaznane že pred restavratorskimi in gradbenimi deli, je bilo jasno, da so bili zidovi cerkve zelo vlažni. Med statično sanacijo je bila ladja cerkve sistematično injektirana, s čimer se je v zidove vnesla še dodatna vlaga. Med sanacijskimi gradbeni posegi so bile narejene horizontalna hidrofobna bariera, klasična vertikalna hidroizolacija in drenaža. Ti ukrepi bi morali znatno izboljšati stanje, kar se tiče vlage v zidovih. Restavratorska dela na fasadah so bila opravljena v času med majem 2018 in junijem 2019. Tekla so vzporedno z gradbenimi deli. Ob zaključku restavratorskih del so bili spodnji deli sten še zelo vlažni. Posledice niso izostale. Prva popravila je bilo treba narediti že med deli leta 2019. Poškodbe so bile vidne predvsem kot strehasto odstopanje in luščenje barvne plasti, opazni so bili temni madeži. Poškodbe so se pojavile predvsem na talnem zidcu prezbiterija, pa tudi na šivanih vogalih okenskih polic prezbiterija. Bile so popravljene, pokitane in poretuširane.
Vendar se je proces propadanja nadaljeval. V letu 2020 so bile poškodbe enake, vendar obsežnejše.

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1. Cerkev rojstva Device Marije v Policah pri Cerknem pred posegi (foto: Minka Osojnik)
1. Church of the Nativity of the Blessed Virgin Mary in Police pri Cerknem before interventions (photo: Minka Osojnik)

2. Notranjščina cerkve pred posegi (foto: Minka Osojnik)
2. Interior of the church before interventions (photo: Minka Osojnik)

3. Poslikava oboka prezbiterija Marijine cerkve (foto: Minka Osojnik)
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4. Cravero (Italy), vault painting in the sanctuary of St Lucy's Church (photo: Andrej Jazbec)

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7. Freska s sv. Krištofom med posegi po odkrivanju (foto: Minka Osojnik)
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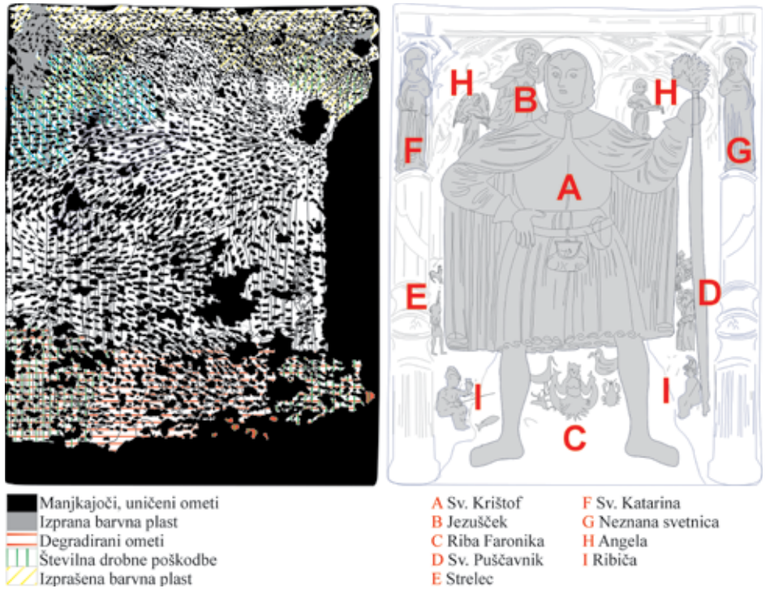
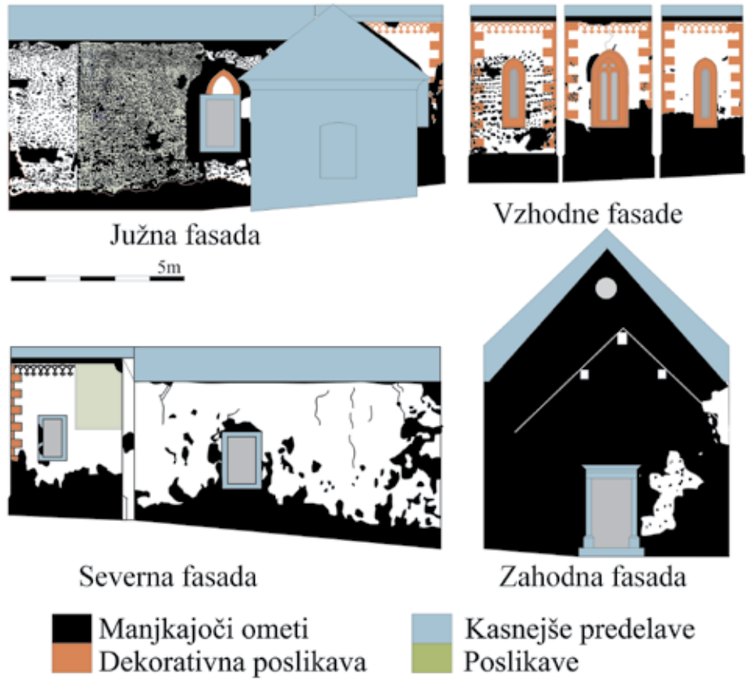
8. Detail of the face of St Christopher after filling (photo: Minka Osojnik)

9. Freska sv. Krištofa po retuši (foto: Minka Osojnik)
9. Fresco of St Christopher after retouching (photo: Minka Osojnik)



10. Freska sv. Krištofa: (a) prikaz poškodb in vrzeli ter (b) poskus rekonstrukcije z motiviko (skica: Andrej Jazbec)
10. Fresco of St Christopher: (a) representation of damage and lacunae and (b) attempt at reconstruction with indication of figures portrayed (drawing: Andrej Jazbec)



11. Prikaz poškodb ometov na fasadah (skica: Andrej Jazbec)
11. Representation of damage to plaster on façades (drawing: Andrej Jazbec)

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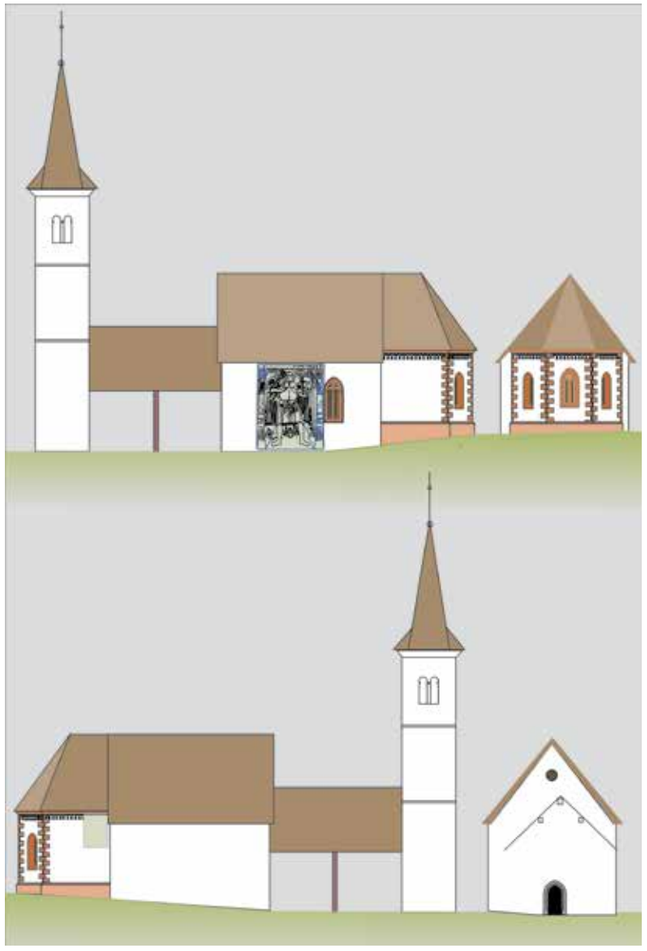
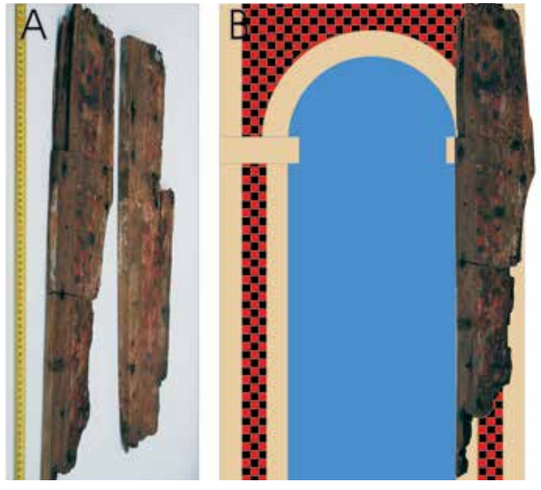
12. Fresco of the Crucifixion after the installation of protective glass (photo: Minka Osojnik)



13. Poskus rekonstrukcije prvotne podobe cerkve. Ni upoštevan zamik orientacije zvonika glede na cerkev. Steber lope je hipotetičen (skica: Andrej Jazbec).
13. Attempt at reconstruction of the original appearance of the church. The shifted orientation of the bell tower with respect to the church is not taken into consideration. The pole supporting the porch roof is conjecture (drawing: Andrej Jazbec)



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15. Obnovljena cerkev rojstva Device Marije v Policah pri Cerknem (foto: Minka Osojnik)
15. Church of the Nativity of the Blessed Virgin Mary in Police pri Cerknem after restoration (photo: Minka Osojnik)

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Post-earthquake reconstruction of the Church of the Nativity of the Blessed Virgin Mary in Police pri Cerknem

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Abstract

In 2018 and 2019 the church dedicated to the Nativity of the Blessed Virgin Mary in Police pri Cerknem underwent structural rehabilitation as part of post-earthquake reconstruction in the Posočje region. Protective and presentational conservation-restoration work was carried out at the same time, as a result of which all the high-quality architectural and artistic elements of the interior have been preserved and conserved, while on the exterior of the church, in addition to uncovering and conservation work, comprehensive aesthetic presentation has been effected.

Introduction

Post-earthquake reconstruction in Slovenia's Posočje (Soča Valley) region in past decades has included the structural rehabilitation of a large number of cultural heritage properties, among them a series of churches with protected status as immovable cultural monuments. These buildings are extremely important for Slovenia's artistic and historical patrimony by virtue of their artistic, architectural, historical and archaeological value. At the same time, they contain important artefacts in the form of furniture, fixtures and fittings and, in many cases, wall paintings dating as far back as the Middle Ages. In the past, as part of post-earthquake rehabilitation for the reconstruction of important monuments, considerable funds have also been devoted to urgent conservation and restoration work, to ensure the survival of the most important protected elements during what are otherwise highly aggressive but, from the structural point of view, essential interventions. In many cases such complementary structural and conservation--restoration interventions have restored these buildings to their original (and frequently colourful) splendour for the first time in centuries. In 2018 and 2019 post-earthquake rehabilitation and structural interventions were carried out at the church dedicated to the Nativity of the Blessed Virgin Mary in Police as part of post-earthquake reconstruction in the Posočje region. Before this, in 2016 and 2017, preliminary research was carried out at the site and a conservation-restoration project was drawn up (Osojnik et al., 2017). The latter envisaged urgent protective conservation-restoration interventions on all interior and exterior plasterwork. Conservation-restoration work and structural work took place simultaneously.

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Brief description of the building and historical overview

The pilgrimage church of the Nativity of the Blessed Virgin Mary stands in the middle of an extensive natural shelf atop a ridge overlooking the valley of the Idrijca, approximately 300 m south-east of the village of Police pri Cerknem (part of the municipality of Cerkno in NW Slovenia). The church is correctly oriented. Looking from east to west, a Gothic sanctuary with rib vaulting and a polygonal (three-sided) termination is followed by a wider rectangular flat-ceilinged nave and a separate bell tower standing just over eight metres from the main frontage of the church. A sacristy abuts the south wall of the church. The complex is surrounded by an oval enclosing wall, with a small graveyard around the church. Inside the church, the sanctuary and chancel arch wall are adorned with frescoes by the master painter Jernej of Loka (aka Bartholomäus von Lack). These have been dated to the year 1536 and are believed to be among his last works.

The church stands within the extensive archaeological area of Police pri Cerknem, specifically within the Sveta Marija (St Mary) archaeological site, catalogued under Heritage Number (EŠD) 19974. Numerous artefacts uncovered during topographic surveys carried out by the National Museum in December 2002 within the Sveta Marija site confirm that the wider Police area was settled from the Late Iron Age until the Late Roman Era (internet 1). According to oral tradition and the literature summarising it, the church stands on "an old ritual site" where a "church of another religion" once stood. Processions used to come to the church in times of drought, since "St Mary of Police" was "of the rain" (Flego, 2006).

The church is not mentioned in medieval sources and appears for the first time in visitation records from 1627 in connection with the graveyard (Höfler, 2016). Originally a chapel of ease within the parish of Cerkno, the church later passed under the parish of Šentviška Gora. Following the completion of the last renovation in 2019, it was returned to the parish of Cerkno with a solemn Mass to consecrate the completed works.

Today's building is essentially still entirely late Gothic. The sanctuary was illuminated by three Gothic windows, one in each of the three sides of the octagon constituting the polygonal termination. The central window was wider and divided by a small column or mullion. The other two were narrower, single-light windows. A wider Gothic window was also found on the south wall of the nave during the last renovation. Inside the church, the sanctuary and chancel arch wall were entirely covered by painted decoration, while the nave was not painted but merely decorated by a number of consecration crosses.

The paintings in the sanctuary follow the system of the "Carniolan sanctuary", which however in the western part of Slovenia is typically enriched by the influence of the nearby Friuli region of Italy. The central field is occupied by the figure of Christ in Judgement, surrounded by angels playing musical instruments, angels bearing the Instruments of the Passion (Arma Christi) and angels in prayer. Prophets with ribbons bearing inscriptions are painted in the spandrels of the vault. A large scene of the Nativity of Christ is painted on the north wall of the sanctuary, while the sanctuary's east end was probably entirely occupied by a row of standing apostles. The frescoes on the lower part of the sanctuary walls have not survived, while a good part of the higher groups of paintings are still hidden below layers of whitewash. Depicted on the inner (sanctuary) side of the chancel arch is the parable of the wise and foolish virgins, while on the outer (nave) side of the chancel arch we find, besides a depiction of the tale of Cain and Abel, two further scenes from Christ's Passion and a standing figure of the Virgin and Child, which, however, is not the work of Jernej of Loka but an older painting. Jernej merely renovated this fresco, adapting his painting to the original frame (Höfler, 1997).

It might be more correct to refer to the Police paintings as being the work "of the workshop of Jernej of Loka", since the work of at least two painters, who divided the work equally between them, can clearly be recognised among the scenes. Clearly Jernej had an already largely autonomous colleague to whom he entrusted a large part of the sanctuary vaulting, while the chancel arch wall is an entirely typical example of Jernej's own work. A comparison can be made with the paintings in the church dedicated to St Lucy in Cravero, in Italy's Friuli-Venezia Giulia region, which date from the same year as those in the church at Police and show surprising similarities, as may be seen from Figures 3 and 4. The hands of the same two different painters can also be seen in Cravero, where they divided the space between them in a similar manner, only that Jernej's share of the paintings in the sanctuary of St Lucy's is even smaller than in Police. In Cravero, Jernej only painted the prophets with inscription ribbons on the sanctuary vault, while the other fields of the vault and the scenes on the walls are the work of another master artist. Just as in Police, Jernej painted the entire chancel arch wall in Cravero. Clearly the two paintings, which are believed to be the last dated works by Jernej of Loka, indicate a gradual conclusion to his extensive oeuvre.

The exterior of the sanctuary was originally adorned with decorative architectural painting. A large fresco of St Christopher, the work of the painter responsible for the Mother of God on the chancel arch wall, was later painted on the south wall of the nave, while the north wall was decorated with a Crucifixion scene, the work of a colleague of Jernej of Loka. The slender, free-standing bell tower with its Gothic portal is believed to have been built at the same time as the church. It also featured painted architectural decoration from top to bottom. Local residents say that in the past a large porch stood between the church and the bell tower, under which pilgrims would sleep. This is confirmed by

traces of three putlog holes found in the west front of the church during the recent restoration interventions (Fig. 11). Baroquisation did not significantly change the church: the nave and sanctuary were slightly raised in height, the Gothic window in the east wall of the sanctuary was bricked up, new rectangular windows were added in the nave and sanctuary, and in 1808 a new stone doorway was added at the west end to serve as the main entrance to the church. The sacristy does not appear in the Franciscan cadastral survey, which means that it was built after 1822. According to local residents, the painting of St Christopher was covered with new plaster in 1911.

The sanctuary vault painting was probably never covered with whitewash. It was restored and somewhat roughly repainted in 1932. The chancel arch and sanctuary walls were whitewashed. Damaged by excessive damp in the lower sections, they were replastered at some unknown point in the past.

In 1964 Emil Smole, then a conservator at the ZVKDS's Nova Gorica unit, placed a first probe on the left-hand side of the chancel arch wall at a height of approximately 3 metres and found surviving paintings. The following summer the restorers Polonca and Rafael Nemec widened the probe and almost entirely uncovered the frescoes on the chancel arch. We read from their restoration diaries that the plaster on the left-hand side of the chancel arch was very smooth but brittle, while that on the right was coarse, as a result of which the whitewash stuck stubbornly to the fresco. The most difficult part was removing whitewash from red paint that had fused with the lime, while there was a considerable quantity of extremely stubborn mineral deposits on both sides of the chancel arch (Nemec, 1965). Although the paintings on the sanctuary walls were still covered by whitewash, their existence was indicated above all by the large areas of damage that excessive damp in the walls had caused to the plaster layers. They were also confirmed by probes. Consecration crosses covered by later whitewashes were partially visible on the walls of the nave.

In 1994 the wooden roof of the bell tower was replaced. No structural reinforcements to the church itself were carried out after earthquakes in 1976, 1998 and 2004, but in the summer of 1999 the bell tower, which showed significant damage, particularly in its south-east corner, underwent structural rehabilitation. At that time the bell tower was also replastered and the decorative painting reconstructed. Owing to the excessive damp in the building and the large areas of damage that had appeared on the interior plaster and already uncovered paintings, the most urgent conservation-restoration interventions were carried out on the walls of the sanctuary and the nave side of the chancel arch wall in 2012, in this way providing mechanical protection for the decaying paintings (Osojnik, 2014). Smaller sections that were detaching from the substrate were entirely covered with gauze, but larger sections had already largely fallen away, so their edges were simply consolidated. Repairs to the foundations were carried out at the same time and an air channel and suitable drainage implemented around the building. Weathered external plaster was chipped off up to a height of one metre and the cornice around the church was repaired and partly rebuilt. The main entrance was cleaned, structurally consolidated and restored. Archaeological investigations were carried out when the ground was dug up for the foundation repairs (Turk, Rupnik, 2012).

Post-earthquake reconstruction of the church in the period 2017–2019

Towards the end of 2016, the Nova Gorica regional unit of the ZVKDS received from the Bovec–Kobarid State Technical Office a list of structures for which structural rehabilitation was envisaged as part of post-earthquake reconstruction. The church in Police was included on this list. In order to identify and evaluate the envisaged urgent protective conservation-restoration interventions and archaeological investigations that would need to be carried out in the case of structural rehabilitation, and in the hope that the necessary funds would be provided for their implementation, we examined all the structures and drew up conservation-restoration projects for them, i.e. folder 3 of the conservation plan. Since project documentation for the structural rehabilitation of the structure had not yet been prepared, determination of the envisaged necessary protective interventions was based on the conservators' many years of participating in the reconstruction of structures as part of post-earthquake rehabilitation, which in the majority of cases includes consolidating walls with systematic injecting, the installation of anti-earthquake ties, consolidation of foundations and protection of walls against damp, etc. An exact list of the urgent interventions was determined subsequently, once the project documentation specifying the envisaged structural interventions for the specific structure had been drawn up.

Structural engineers Blaž Dolinšek from the State Technical Office and Vilko Šuligoj from Projekt d.d. of Nova Gorica collaborated on the examination of the church in Police and the planning of a high-quality structural renovation that would also be kind to the monumental substance of the structures concerned.

State of the structure before interventions

Cracks were visible at the join between the wooden ceiling and the supporting wall in the church nave, at the point where the sacristy joins the church, and around window openings (cracked lintels). A large crack was visible inside the nave above the window in the north wall. The chancel arch was cracked at the crown, which was probably the consequence of movement of the longitudinal walls during the earthquake. The church roof was in a good state. The severest damage to the building was the consequence of damp penetration, with damage most visible in the lower parts of the walls: plaster falling away, crumbling walls, mineral deposits, algae, reticulate cracks, and so on.

Large vertical cracks were observed in the bell tower. These had been covered from the outside by newer plaster. Steel ties installed during past repairs had not been treated against corrosion and had therefore started to rust. Major damage was also observed to the shingled roof, which was leaking.

State of plasterwork and paintings

Leaving aside the structural aspects, the main problem of the church was damp, which was apparent above all in the interior. The internal plasterwork was badly decayed from a height of one metre to around two metres and plaster was coming away from the wall. Blisters of various sizes and a very hard and crusty consistency had also formed and could be seen protruding from the wall (Fig. 5). In some places, only the thin top layer of plaster had fallen away, while elsewhere several layers had come away together. Where the central, upper part of a blister had already detached, damage was visible in the form of craters. These were largest and most numerous in the sanctuary and on the north wall of the nave. They are believed to have been caused by magnesium salts (Matteini, 1999),[1] the presence of which has also been confirmed by scientific analysis (Kavkler et al., 2018). Mineral deposits were present in thick layers in the lower parts of the walls. Several probes were carried out on the sanctuary walls. The largest probe was on the north wall, where the scene of Christ's Nativity was partially visible. Before work began, it was not clear to what extent the paintings in the other parts of the walls had survived.

The paintings on the sanctuary vaulting and the inside of the chancel arch were in good condition. No more recent damage was visible since the interventions carried out in 1932.

The paintings on the nave side of the chancel arch wall had for the most part already been uncovered from beneath layers of whitewash. All the painted scenes had been uncovered, while only the decoration of the chancel arch itself and the lower part of the painting, covered by a thick layer of mineral deposits, remained covered. The remains of whitewash and mineral deposits were, however, still present on the surface of the painting, which gave the painting a whitish, hazy appearance.

The outside walls of the church were covered by a coarse plaster dating from 1911. For the most part, this very hard and quite thick layer of plaster was in good condition. A large patch of plaster on the outside wall of the sanctuary had fallen away, while the lower decayed section of plaster near the ground had been replaced during installation of a drainage system in 2012. Higher up, in places where rising damp permeates through the walls, the church walls were surrounded by an almost unbroken area of damage at a height of 1–2 metres.

Probing carried out by the ZVDKS's Nova Gorica regional unit revealed the state of conservation of the older, original exterior plasterwork on the church walls, the decorative painting on the outside walls of the sanctuary, and two painted scenes. The scene on the south wall of the nave was immediately identifiable as St Christopher. Another scene depicting an unknown subject was found on the north wall of the sanctuary. Probes also showed that the outside walls of the nave were covered with coarse white plaster and that the sanctuary walls were covered with smoothed plaster.

On the basis of the probes and other research and the inspection of the structure by structural engineers, it was determined in the conservation-restoration project for the renovation of the church in Police that in the event of excavations of any kind it would be necessary to undertake archaeological investigations in the form of archaeological documentation carried out alongside construction. The project envisaged additional systematic probing of the interior walls, the uncovering of the paintings on the exterior walls and the protection of all elements that are part of the load-bearing structure of the building and have particular monumental value or which are damaged to the extent that they would be endangered by any major construction work. The renovation of the exterior also envisaged all aspects of final presentation (Osojnik et al., 2017).

Structural rehabilitation and other construction work

Post-earthquake rehabilitation and structural consolidation of the building included the systematic injecting of the stone walls of the nave, exclusively from the inside, and the sacristy walls. To begin with, a grid of probes was used to identify the presence of any paintings under the layers of plaster and whitewash on the walls of the nave.

A lime binder from Mapei that is chemically and mechanically compatible with the lime of the plaster and does not damage paintings was used for injecting. Diagonal and (above the ceiling structure) vertical reinforced concrete ties were installed in the gable wall, the church walls were connected by steel tensile ties, and a reinforced concrete tie was put in place above the chancel arch wall. Local re-

1 Mauro Matteini, Alberto Felici – verbal statement. To date, no method has been found to remove them from the wall and carry out remediation. The blisters are very hard and brittle.

pairs were applied to the damaged nave ceiling and beds with steel anchor plates were made for the roof beams. The existing roof structure was properly fastened to the stone walls, but apart from this no repairs were carried out to the roof and roof structure, since they were both in satisfactory condition. The church foundations were underpinned and jacketed with concrete and injected with a water-repellent injection compound. Drainage was carried out at the bottom of the foundation and a chemical water-repellent barrier implemented at the level of the interior pavement. The lower band of plaster up to a height of 2 metres was removed in unpainted areas and new remedial water-repellent plaster was applied in the nave. Around the outside perimeter of the church, the plaster was interrupted at a height of 20 cm above the ground and the band of visible wall below that was deeply grouted.

The bell tower foundations were underpinned and jacketed with concrete and the supporting walls were systematically injected (from the inside only), after which the inside walls were surrounded with reinforced plaster anchored in the existing stone walls. The existing steel ties were cleaned and treated against corrosion. Inspection of the roof revealed that this was in a significantly worse state than originally assessed, so local repair of the wooden roof covering would not have made sense. The roof of the bell tower was therefore fully renovated with new larch shingles.

Simultaneous archaeological investigations were conducted during the excavations for the rehabilitation of the foundations.

In order to protect the fresco of St Christopher on the south wall of the nave, a canopy measuring 500 x 204 cm was constructed. The framework of this canopy consisted of square steel profiles. Wooden boards and a flat sheet metal covering were then placed on this steel framework. The canopy has a single pitch at an angle of 22°. On the north wall of the sanctuary, which is exposed to precipitation and strong winds, a protective glass covering measuring 155 x 200 cm was made for the fresco of the Crucifixion using tempered glass with UV protection, which will also protect the fresco against wind and rain while at the same time allowing normal ventilation thanks to the sufficient gap left between the glass and the wall.

Restoration interventions

The restoration interventions triggered by the building work and rehabilitation measures had the primary aim of preserving and protecting all original older elements. It was decided that all original high-quality plasterwork on the external walls and in the interior of the church should be preserved. For the exterior, the removal of the more recent unsuitable façade and a full restoration intervention consisting both of conservation work and of final presentation work, including retouching of the paintings, was envisaged. In the interior, only protective interventions with the most urgent presentation interventions were carried out, without retouching or the uncovering of new painted areas still covered by plaster and whitewash.

It was first necessary to establish the extent of surviving original façades and paintings. The outside walls of the sacristy, which is a later addition without any particular features of interest, were excluded from the restoration interventions.

Probing in the interior

Grid probing of plaster and whitewash layers was carried out in the interior of the nave. This enabled identification of the extent and condition of the surviving paintings. The boundary or level above which original plaster survived was identified in the lower parts of the wall. Probing uncovered seven surviving consecration crosses on the nave walls. The remains of a painted frieze consisting of bands of three colours – red, yellow and blue – were discovered running along the tops of the walls. This frieze was best preserved in the north-west corner of the nave. In view of the fact that it was found on the first layer of plaster, below the painting on the chancel arch wall, it is evident that it belongs to the original decoration of the nave and is older than the paintings by Jernej of Loka. The nave walls were densely covered with drips in the same three colours, although it is not clear whether these formed by chance during the painting of the frieze and the wooden ceiling (also presumed to have been painted in the past), or whether they were done intentionally as a form of decoration of the walls. Given the relatively dense and uniform grid of drips on the walls, the second possibility appears more likely.

Probing of the sanctuary walls and chancel arch wall revealed the extent of the surviving paintings. It turned out that the plaster layers in the lower parts of the walls, which were worst affected by salts, were more recent, without remains of paintings. A further layer of painted plaster was observed below the layer containing the painting by Jernej of Loka on the wall behind the altar. It is not possible to say what type of painting this is on the basis of the area opened to date. It may be an older consecration cross or the original altar painting by the painter who painted the Virgin Mary on the chancel arch wall and St Christopher on the outside wall of the church.

Restoration work in the interior

The paintings in the nave and on the walls of the sanctuary were consolidated by injecting lime, sealing damaged edges and filling damaged areas. Small blisters caused by the migration of magnesium salts were filled with lime mortar. This method would not have worked with larger blisters because the weight of the mortar would have pulled the blister from the wall and its adherence to the substrate would also be questionable. Larger blisters were therefore filled with low-expansion polyurethane foam, which is light, easily adapts to the shape of hollow pockets, adheres well, offers long-lasting resistance to UV rays and can be easily removed using a solvent, in this way allowing alternative solutions in the future. Low craters were filled, while the edges of those that protruded further were cut and pressed into the wall, to which they were attached using lime mortar.

Whitewashes and their residues were mechanically removed from the paintings on the chancel arch wall and the consecration crosses using scalpels. Electric grinders with grindstones and brushes were used to help remove remnants of mineral deposits from the lower parts of the walls. The uncovered paintings were treated with poultices of 5% ammonium carbonate. Rinsing was carried out through a layer of Japanese paper because of the weakness of the paint layer. The paint layer, which in the higher sections was pulverised and without binder, was fixed by a 1.5% solution of ammonium caseinate and multiple applications of nanolime.[2]

In the lower part of the sanctuary walls and chancel arch wall, new lime plaster was applied at the level of the layer of original plaster. This was whitewashed in the colour of the original paint. The same whitewash was used to paint those parts of the sanctuary walls where as yet uncovered paintings were present. Damaged parts of the consecration crosses in the nave were retouched and a probe with part of the original decorative frieze running along the top of the nave walls was presented in the north-west corner.

Uncovering original plaster layers on the outside walls

The removal of more recent plaster from the outside walls of the nave was done using a pneumatic drill because of its thickness and hardness, while on the walls of the sanctuary, which were smooth and painted, this was done by hand using hammers and chisels. The most urgent consolidation work was carried out as the work progressed.

It became apparent that the original plaster was well preserved on the south and north sides of the nave, while on the west front only a few patches survived. Three bricked-up square niches were also found on the west front. Given their position and verbal accounts, it is assumed that these were the putlog holes that served to support the roof beams of the porch that once stood between the church and the bell tower (Flego 2006).

The original heights of the walls of the church nave and sanctuary were also identified, along with the original slope of the roof at the west end of the nave. The roof had, in fact, already been replaced in the past. The original roof had its ridge at approximately the same height as the present roof, but the longitudinal walls of the nave were lower, which means that the roof had a considerably steeper slope.

On the outside walls of the sanctuary the original plaster had decayed entirely up to a height of 1–1.5 metres, while higher up it was relatively well preserved. Except on the south-east side, which was densely pockmarked, only smaller individual areas of damage and lacunae were visible. The original façade plaster with its painted decoration was covered by several layers of whitewash. Damage caused by the action of precipitation was apparent above all in the form of abrasions and the leaching of the paint layer and whitewashes. The decorative painting of the sanctuary walls, done in brick-red, consisted of painted quoins at the corners, a geometric plant-pattern frieze along the top of the wall and painted window surrounds with the grouting lines painted in. It was done in the fresco technique. Given the absence of older layers of plaster and the similarity to the decoration in the interior of the sanctuary, which is likewise on the original layer of plaster (below the layer with the paintings by Jernej of Loka), we assume this to be the original architectural decoration of the church, done at the time of its construction.

The wider Gothic window on the east side of the sanctuary was bricked up before the interventions. Since the sanctuary would look incomplete without this important architectural element, we decided to half-open it and present it as niches in the façade. During the opening of the window it was found that the original tracery was still in its original position, while all the pieces of the mullion that divided the window in the middle were found among the construction material used to brick up the window. Fragments of the original glazing were also found.[3] The window was reconstructed in its original form and filled with pieces of porous concrete shaped to fit the window apertures.

The removal of later layers of plaster confirmed the assumption that the painting on the south wall of the nave depicts St Christopher. Following removal of the plaster, the image could be seen in faint outline. With the removal of the remnants of mortar, the image became clearer. A full-length depiction of St Christopher with the infant Jesus on his right shoulder and a flowering staff in his left hand is placed in a vaulted niche. As usual, Christopher is shown standing with his feet apart in the middle of a river, his right hand on his belt, from which hangs a small bag. Smaller niches above the columns on either side of the central niche contain depictions of two female saints, which are only partially preserved. The attributes of the

2 Nanorestore (CTSSrl). Nanolime dispersion in isopropanol. This restores lime binder to decayed existing plaster layers and rehabilitates them.

3 The fragments found were all translucent and unpainted. The diameter of an individual round segment was around 8.5 cm.

saint on the left – a sword and a broken wheel – allow us to identify her as St Catherine. Two angels with lutes are depicted behind Christopher's shoulders. Interestingly, the right-hand one is wingless. As is usual in depictions of St Christopher, the mythological fish Faronika, representing the force of nature, is depicted in the river between his feet. Swimming around it are other fish, a crab and a creature with tentacles that is hard to identify because of the damage. Two ducks and what is probably a heron are also shown. On either bank of the river, barely visible because of the poor state of conservation, sit two men. Judging from the rods in their hands they are probably fishermen. The one on the left has his arm raised and appears to be holding a jug, with which he is toasting his colleague on the other side of the river. Slightly higher up, on the right-hand side, a hermit with a lamp in his hand is depicted peering from behind Christopher's cloak. A church is visible in the background. According to the legend of St Christopher, this hermit was not actually present when St Christopher crossed the river, but painters often included him in the scene to help fix the event in time – it was supposed to have occurred at night, as indicated by the hermit's lamp (Golob, 1982: 21). On the opposite side of the painting from the hermit, a standing figure is squeezed into the narrow space between Christopher's cloak and the column on the left and is aiming some kind of firearm at a horned animal above him (Fig. 10).

Given the use of the same colours, the similarity of the faces and other details, and the identical decoration of St Christopher's robe and the outside of Mary's cloak in the depiction on the chancel arch, we are able to attribute both paintings to the same artist from the early sixteenth century (Höfler, 1997: 117).

The fresco of St Christopher originally measured approximately 5 metres in height and 3.7 metres in width. At the time of our intervention, approximately 40 cm of the part nearest the ground was already destroyed, while around 40 cm on the right-hand side had been lost as a result of the opening of the later, wider window. As a result of the action of damp, the lower part of the painting was only partially preserved. Higher up, the plaster of the painting was densely pockmarked across its entire surface. The pockmarks were larger and sparser lower down and increasingly small and dense further up. No remains of whitewash were found on the painting. It appears that the painting was never covered by whitewash, but simply directly covered by the plaster of the later façade. The state of conservation of the paint layer varied considerably. In the lower part of the painting it was pulverised and featured numerous small areas of damage. In the central section, it was very well preserved: healthy, with saturated colours that were partially effaced. The situation was worse again in the upper section, where the paint layer was partly flaky and pulverised, there were numerous small areas of damage, and the colours were faint. The top left-hand corner of the fresco was washed away down to the plaster. Widened by the washing action, the originally narrow cracks in the plaster now also extended further down, into the better conserved part of the painting (Fig. 10).

To the right of St Christopher, above the present rectangular window, the top of the original Gothic window was found. The width of this window and the pieces of mullion found among the material used to brick up the opening indicate that this was a window with two lights divided by a central mullion. This fragment of window has been presented simply as a faint relief outline on the plaster of the façade. We opted for this form of presentation because of the supporting frame of the new protective canopy over the fresco of St Christopher, which had to be fixed to the wall exactly at the point where the remnant of the window is located.

The newly uncovered fresco on the north wall of the sanctuary was revealed to be a Crucifixion scene. The stylistic characteristics of the work permit us to attribute it to a colleague of Jernej of Loka.[4] In the centre of the scene is the crucified Christ. Two flying angels, one on either side, collect the blood from his wounds in chalices. The inscription on the ribbon at the top of the cross has not survived. Three figures are depicted in the lower part of the scene. Standing figures are shown on either side of the cross, one on the left and one on the right. The foot of the cross is embraced by a half-kneeling female figure, presumably Mary Magdalene. Jesus' mother Mary stands on the left, hunched in an attitude of mourning, while on the right St John the Evangelist is depicted as a fair-haired youth. In the lower part of the picture, within the painted frame that surrounds the scene, is a faded, partially preserved inscription that has yet to be interpreted.

Like the fresco of St Christopher, this Crucifixion scene was never covered by whitewash and instead was directly covered by the later façade plaster. While the rest of the façade was whitewashed several times, the frescoes remained visible until they were covered by the plaster of the most recent façade. The Crucifixion, though it has survived in its entirety, shows traces of its long exposure to the elements. The action of rain over a long period has significantly widened the cracks in the plaster that would have formed while the painting was drying, immediately after its execution. Originally tiny hairline cracks, these have widened into cracks that are 0.5 cm wide or more. The paint layer is nevertheless well preserved and only partly effaced.

Restoration of external plasterwork

The original plaster covering the outside walls was cleaned, hollow sections were injected, small areas of damage were filled and missing sections were replastered. The plaster of the entire west front was reconstructed. During reconstruction of the exterior plaster, the presumed positions of the putlog holes supporting the former porch beams were indicated by a slightly deeper application. Lime mortar with quicklime was selected for the reconstruction of the missing parts of the façade.[5] The mortar was applied in three layers to the cleaned wall: first rough sprayed plaster, then the deep sections were levelled, then the final layer was added. In the case of the plaster on the outside walls of the nave, an attempt was made to imitate the coarse surface of the original façade of the church. This was achieved by partially levelling the plaster with a trowel and then, when it started to harden, applying limewash to it with a brush. When dampened again, the top layer softened to the extent that it could be partially worked. The result was an undulating, wrinkled surface on which the trowel strokes remained visible. Working with the brush softened the irregularities and partly smoothed the surface, while small holes were filled and closed. Four coats of limewash were applied to the façades. The subsequently heightened sections of the nave and sanctuary were treated in exactly the same way as the reconstructed original façades, using coarse plaster, although in a slightly different pattern for the sake of recognisability.

When it came to the presentation of the painted façade elements of the sanctuary, we were faced with a dilemma because of their exposure to the elements and consequent decay: should we present the original façade or cover it with lime plaster and carry out a reconstruction of the painted decoration? We chose the first option, with the proviso that all available protective means would be used. The original façade plaster was first treated twice with nanolime. Next, a procedure was carried out to consolidate the paint layer of the painted sections of the façade using ammonium carbonate and barium hydroxide. This is a process that was developed in Italy in the 1960s. Barium hydroxide is a chemical substance that is chiefly used to stabilise sulphur and consolidate lime-based wall paintings. It is applied to a surface in an aqueous solution via a cellulose pulp poultice and works on the basis of a chemical process in which calcium sulphate, which is unstable, is converted into insoluble barium sulphate. It is usually applied after preliminary poultices which remove superfluous *gesso and block sulphate residues. It is only suitable for paintings done in the true fresco technique with alkali-insensitive pigments. Barium consolidates paintings containing a protein/animal binder but destroys bonds in paintings containing a vegetable binder. The incorrect use of barium hydroxide on the surface for painting can cause irreparable bleaching. It ensures the vapour permeability of plaster and paintings and resistance to sulphur. The process can be repeated as necessary. One limitation is the presence of magnesium salts, which must be lower than 2%.*

With the exception of few small-scale tests, this was the first time this method had been used in Slovenia. In connection with the sanctuary paintings, a workshop on barium hydroxide was organised in 2018 by the Restoration Centre and the Society of Restorers of Slovenia. The workshop was led by Claudia Ragazzoni, a restorer from Trieste.

Pigments containing 2% ammonium caseinate as a binder were used to retouch damage in the paint layer and reconstruct missing parts of the painting. Retouching was carried out in glazes in several applications. The missing parts of the architectural decoration were reconstructed using the same technique. This was followed by fixing the retouched areas with a second application of barium hydroxide. This made the retouching irreversible and permanent.[6] The consolidation and protection of the decorative painting on the outside walls of the sanctuary concluded with an application of ammonium oxalate via cellulose pulp poultices.[7]

The original roof overhang, made from pieces of tufa, which topped the painted façade of the sanctuary was indicated as a projecting band in the coarse plaster, coloured in fresco technique using lighter colours than those of the surviving architectural elements. The same solution was adopted for the ground course of the sanctuary. The painting on the reconstructed window ledges was also done in fresco technique, but in this case on a smooth surface.

The bell tower, the façades of which had undergone renovation in 1999, had a surviving pointed-arch Gothic doorway made of tufa on which some scant remnants of architectural painting were visible. Owing to its exposure to the elements, we decided to protect it with a coat of plaster. The painted decoration on it was reconstructed using the fresco technique on the basis of the surviving fragments and following the model of the other architectural decoration on the church.

The paintings of St Christopher and the Crucifixion

Following the removal of plaster from the surfaces of the paintings, fine mechanical cleaning was carried out with scalpels in order to remove the remnants of mortar. Consolidation work was carried out at the same time: sealing

4 The painting was done by an artist who, on the basis of stylistic characteristics, can be identified as a colleague of Jernej of Loka.

5 Quicklime from nearby Vitanje was used (supplied by Ravnak Anton – Dopolnilna dejavnost na kmetiji, Kovaška cesta 8, Vitanje). The sand came from a local sand quarry in Bukovo (Razpet, d. o. o., Bukovo 67, Cerkno). Thanks are due to Jože Drešar of Gnom d.o.o. for his advice on the preparation of plaster using quicklime.

6 The irreversibility of the retouching and reconstructions is justified by the exposed position of the painting and the fact that it is decorative, architectural painting of relatively minor importance. Retouchings were not fixed on the figurative paintings, which were additionally protected by, respectively, a canopy and a glass panel.

7 This is the last stage of the process begun with poultices of ammonium carbonate and barium hydroxide. Ammonium oxalate provides additional protection against precipitation, acids and sulphur. It also intensifies the colours of the painting.

the damaged edges of the plaster of the paintings, injecting hollow and detached sections and strengthening weak, deteriorated plaster with nanolime.[8] This was urgent in the upper part of the painting of St Christopher, and even more so in the lower part, where because of the brittleness of the original plaster, final removal of mortar residues was only possible after consolidation. The most badly affected areas needed up to eight repetitions of the procedure. Nanolime penetrates several centimetres deep into deteriorated plaster and consolidates it deep down but it is difficult to achieve a stable, solid paint layer on the surface using nanolime. This was therefore achieved through later treatment with barium hydroxide. Three applications of nanolime were used in the central sections of the paintings of St Christopher and the Crucifixion, where the plaster was in better condition.

The next stage involved ammonium carbonate poultices and rinsing of the surface of the paintings. Then it was time to fill the small areas of damage where retouching was envisaged. Following good results with two small test samples, we decided to consolidate the paint layer of the paintings using barium hydroxide. The paint layer was, in fact, still partially effaced – above all the red and ochre colours – which, given the prominence of the painting on the façade, was not acceptable. Following application of the barium, the salts that had appeared on the surface of both paintings were eliminated by repeated rinsing.

Next came the retouching of damaged areas. Here, however, different approaches had to be used because of the different situations of the two paintings. In the case of the Crucifixion, the relatively homogeneous network of cracks did not significantly reduce the legibility of the fresco. Filling the cracks and retouching the painting to its original state did not seem the right choice, since this would have caused the painting to lose authenticity. The process would be time-consuming and difficult, for a relatively modest return. We therefore decided to conserve the painting in its damaged state, while rendering the bright white cracks less obtrusive through light toning in a neutral shade.

The situation was completely different with the fresco of St Christopher, which showed several types of damage. Most troubling was a network of score marks and small lacunae. This was distributed relatively evenly over the entire surface of the fresco, although the damaged areas were larger and deeper in the lower part of the work and smaller in the upper part. The state of conservation of the paint layer was very uneven. In the central part of the fresco, it was very well preserved and very strong, while in the upper and lower parts the state of conservation and intensity of the paint layer were poorer. Not only that, but there were many cases of minor damage, particularly in the upper and lower parts of the painting. In the top left-hand corner the paint layer was entirely washed away and only bare plaster remained. There were also several larger lacunae in the fresco that were unsuitable for retouching. The largest of them affected the whole of the missing lower part of the painting. The painting is on the wall of the church and visible from a distance. As such it is an important architectural characteristic of the building. It was necessary to ensure a homogeneous and natural appearance for the painting and at the same time restore its legibility.

Retouching of minor damage with glazes helped bring the state of the top and bottom sections of the painting closer to the state of the middle section. An initial attempt was made to retouch the score marks affecting the body of the painting in a lighter tone, but this turned out to be insufficient. While the pattern of damage would in this way become slightly less obtrusive, it would still be disturbing. The best solution was found to consist of adapting the retouching of the score marks to the local state of preservation and intensity of the colours. Retouching using the *tratteggio* (hatching) technique was chosen as the most suitable method. Even in the original painting, the painter's brushstrokes are quite pronounced. The pattern of the retouching lines followed these. Where the direction of the brushstrokes was not so clear, we chose a vertical pattern. The repeated application of colour by means of hatching was also the easiest way to achieve the intensity of the colours of the original painting. Some larger areas of damage were also retouched. The biggest of these was a large lacuna in the bottom right section of St Christopher's robe. Only the ochre ground, with modelling of the folds of the material, was reconstructed during retouching of the damage on the robe. The presentation of some figures that were partly well preserved and partly completely destroyed was a particular challenge. An example of this is Jesus' frock, the paint layer of which was well preserved in the lower part of the image but destroyed in the upper part. A soft, organic transition between the two extremes, achieved via retouching, restored integrity to the figure. The situation was similar with the angel behind St Christopher's right shoulder. The body of this angel, the lower part of which was very well preserved, was interrupted by a large lacuna, while the head was only partially preserved. The head of St Catherine atop the column on the left-hand side of the painting was lost in the section on the top left-hand corner in which the paint layer had washed away. By conserving the network of cracks in the plaster and imitating them on the newly filled score marks, a soft, natural transition was achieved between the missing and preserved parts of the depiction of the saint. St Christopher's face was also quite badly damaged. By supplementing the missing parts of the eyes, eyebrows and nose, integrity was restored to the figure, which is justified by the key role of this part of the painting.

Retouching the hunter on the left-hand side of the painting presented another particular challenge. Damage had affected some key parts of the image: the upper part of the body including the head, the arms and the central part of the weapon, the top of the weapon's barrel and the animal's forelegs. Surviving details around the edge of the damaged area enabled us to reconstruct the shape of the gun, the position of the hands and the length of the gun barrel. The missing details were retouched by hatching that followed the progression of individual colours, without details. This approach was justified in this case not only by the question of the integrity of the painting, but also by the documentary value of the detail. It is in fact the oldest known depiction of the use of a firearm in this country (Lazar, Jazbec, 2019: 203–218).

The missing lower section and larger lacunae were presented as damaged areas and filled to below the level of the smoothed plastered surface. The colour of the plaster was adapted to the colour of the original plaster of the fresco, which is visible in the top left-hand corner where the paint layer has washed away. The missing right-hand part of the fresco by the window was treated as part of the façade.

With the completion of aesthetic presentation, the painting's uniformity was restored and some of the most troubling damage was rectified. It is now possible to experience the painting as a whole, with its compositional qualities, colour relationships and small documentary details. Damage that could not be repaired has been unobtrusively incorporated into the whole.

Other finds

A number of small finds that offer us greater insight into the history of the church were uncovered during the renovation.

The present late baroque stone altarpiece is at least the second in this place. It was transferred from the abandoned St Mary Magdalene church in Daber (Šentviška Gora).[9] The statue of the Virgin Mary in the niche of the altarpiece is a modest nineteenth-century work. Some remains of the previous altar are still present in the church. At the top of the altar are three wooden statues: a saint-bishop and two angels. They are superficially covered with a white coating, beneath which old polychroming is partially visible. The wooden structure above the steps up to the choir gallery incorporates some repurposed polychromed boards. Along with a statue of the Virgin and Child which is today in Šentviška Gora,[10] these are the remains of an older wooden baroque altar. Dating probably from the 1630s or 1640s, this was the work of the woodcarver's workshop in Ljubljana that supplied several small side altars to, for example, St Peter's Church in Dvor (Jazbec, 2001). Two pieces of shaped and coloured tufa built into the wall as spolia by the present church doorway may also be remnants of the original baroque altar – possibly remains of the decoration of the former altar table.

Two sawn spruce planks with smoothed surfaces were also found during the renovation work. On two sides of both planks it was possible to observe incisions in the wood, a groove for fastening and polychroming. The fronts of the planks were painted with a black-and-red chequered pattern, while on one of the narrower sides the remnants of red paint and blue azurite were visible on a white ground. On the larger of the two planks, a segment of a circular incision in the wood was observed next to the groove, which determines the shape of the painted area with the chequerboard pattern. In view of the curve traced by the pattern and the blue colouring on the narrower side of the plank, we may conclude that the plank was part of a painted wooden structure flanking a niche. Taking into account the arc of the curve, and assuming that the top of the niche was semicircular, we may conclude that the niche was approximately 32 cm wide and at least 82 cm tall. Judging by the unpainted areas and the incisions in the wood, the niche was surrounded by an additional projecting frame. The two projecting horizontal shoulders at the transition to the curve at the top of the plank also extended into the niche aperture (Fig. 14). In the light of the above, it seems most likely that the two painted planks are the scant remnants of the former altarpiece in the church. The chequerboard pattern, however, is not typical of the Ljubljana workshop that made the altar in the seventeenth century. Could they perhaps be fragments of the original sixteenth-century altar?

Immediately below the roof on the left-hand side of the chancel arch wall is a stone with a fragment of fresco consisting of red squares on a light ochre ground, which is probably part of a stencilled ornament forming the stepped square pattern of a painted frame. Such decoration appeared in Slovenia in around the year 1400 in wall paintings of Friulian influence (Praprotnik 1973: 60–61).

All the restoration work was carried out under the leadership of Andrej Jazbec by a team from the Restoration Centre consisting of Maja Cingerle, Katja Guček, Eva Sirk, Petja Berginc, Saša Snoj, Zoran Flander and Primož Fučka.

The roof of the bell tower was given a new covering of larch shingles. The work was carried out by Skodlarstvo Bohinj Nejc Dijak s. p. of Bohinjska Bistrica, who responded with great promptness to our request, in that replacement of the whole roof was not originally envisaged.

The cultural protection conditions included the requirement of archaeological supervision during the excavations carried out for the purpose of rehabilitation of the foundations and the implementation of drainage. This supervision

8 Applied by spraying. Immediately after the application of nanolime, the surface was sprinkled with water. This has been observed to reduce the risk of bleaching and carbonation of the lime on the surface of the painting. A brief application of water is sufficient to prevent the alcohol from evaporating too quickly.

9 Oral source: Stane Makuc, Police 13.

10 Now in St Vitus's Church in Šentviška Gora (Jazbec, 2007). In addition to stylistic similarities with the statue of Mary and the wooden altar statues in the church at Dvor, the two layers of polychroming, comparable on all the statues, indicate a common origin for the statue of Mary and the statues of the saint and angels.

was provided by the archaeologist Miha Mlinar of Tolmin Museum.
Construction work was carried out by GRAS d.o.o. under the direction of Matevž Bergant, while the responsible supervisor from the Bovec–Kobarid State Technical Office was Zvone Hren. Conservation supervision was provided by Minka Osojnik, Brane Zbačnik, Marta Bensa and Katja Kosič from the ZVKDS's Nova Gorica regional unit. The ZVKDS's Working Group for the Protection and Conservation of Wall Paintings met several times at the site in connection with decisions regarding restoration solutions and final presentation. Dr Nika Leben of the ZVKDS's Kranj unit also visited the site and offered valuable advice.

Conclusion

In recent years conservators and restorers working in the Posočje region have increasingly frequently been faced with the problem of a lack of funds for protective conservation-restoration interventions, while post-earthquake reconstruction has continued. The consequences of this lack of funds have unfortunately been visible on the ground, with wall paintings among the artefacts most affected by the situation. Meanwhile conservators have, for the same reason, been compelled to limit structurally important interventions on buildings, which has likewise done little good to the structures concerned (Osojnik, Jazbec, 2017a, 2017b).
In the case of the Nativity of Mary church in Police, improved cooperation between conservators and builders and, above all, a rapid response when it came to drawing up renovation plans and conducting research has resulted in a good-quality structural renovation that respects the material substance of the building and contributes to the conservation of all essential monumental elements. The church in Police is among those structures that were already in an extremely poor state before the earthquake. Owing to the remoteness of its location, the structure had been poorly maintained for years, while in view of the demographic situation in the area it would be difficult to expect significant financial investments in the future that would contribute to renovation of the cultural monument. Thanks to post-earthquake reconstruction, not only has the building been structurally consolidated but the main causes of decay have also been remediated. All the high-quality architectural and artistic elements of the interior have been preserved and conserved, while on the exterior of the church, in addition to uncovering and conservation work, comprehensive aesthetic presentation has been effected.
In Slovenia we have witnessed the rapid deterioration of wall paintings on the exteriors of buildings in recent decades, and it is clear that we are fighting a losing battle. Since there have been no satisfactory solutions in sight, we conservators and restorers have resorted to alternatives: removing paintings and transferring them to a safe environment, creating copies, covering original paintings, and so on (Bogovčič, 1985: 93–97). While it is true that such solutions enable the survival of the original paintings, they also bring a range of other problems which, in the case of removing an original and making a high-quality copy in the original location, are not limited merely to the most common problem – i.e. the financial aspect. The question of where to put the original is perhaps most difficult to answer in the case of paintings portraying the giant St Christopher – because of the dimensions of the work. Even when a sufficiently large space is found for the original painting that, ideally, is also close to the original location, there can be a problem of context, for example when a fresco of St Christopher, who is supposed to protect believers from sudden death, is located in a chapel of rest above a funeral bier (Zoubek, 2017: 280–281). This example leads us to the main problem with removing or covering paintings: the problem of context. A wall painting is not, essentially, a movable object. It is made for a precisely determined location and, above all, to be looked at, so that it can transmit its message to us and so that we can enjoy it.
Protective canopies are not a new conservation solution, although they have not always been viewed favourably by monument conservation professionals in the past because, from the aesthetic point of view, they have often compromised the appearance of the exteriors of protected buildings (Golob, 1982: 30). In some cases, following the uncovering of paintings, measures have been envisaged for their physical protection against rainwater and UV rays but then not implemented (Leben, 1999: 9). In the case of the paintings on the outside of the church in Police, we used restoration methods of consolidation and conservation that have not previously been used in Slovenia and, by physically protecting the paintings with, respectively, a canopy and a glass panel, attempted to find a solution that would permit the long-term survival of the original paintings in their original location. No solution is ideal: each has its good and bad sides and is a kind of compromise between the ideal aesthetic solution and protection designed to enable the long-term conservation of wall paintings. This also applies to canopies and glass panels, which from the point of view of aesthetics and authenticity are, of course, alien elements.
The church in Police is the third in the context of post-earthquake reconstruction in which the original façades have been conserved and restorers have taken on the responsibility of rehabilitating them (Osojnik, Jazbec, 2017a, 2017b). Conservation professionals have long been drawing attention to the unsuitability of newly made façades on monuments (Deanovič, Kavčič, 2004). Today's builders have a different way of working from that of the old master builders. Coats of plaster are thicker and the final treatment is different. The points of contact between new plaster and the visible stone elements of an old façade such as stone quoins on the corners of buildings are also problematic. Materials are different too. As well as cement, which, as the basic ingredient of mortar or as an additive, allows thicker applications and greater strength, but gives mortar an unmistakable alien grey tone, there are also modern paints, most frequently silicate-based. These have a different surface and a different lustre from the original lime. They also age differently – they darken as they age, deteriorate differently and flake differently. The signs of decay of a lime façade are not as disturbing because they belong to it, they are typical of it. The signs of decay of modern materials on historical buildings, however, are disturbing in two ways – as a sign of decay and as something uncharacteristic: an alien sign of decay. Constructing a new façade with modern materials deprives a building of a considerable part of its authenticity and also its aesthetic value. For this reason it is essential to conserve original lime façades and restore them using authentic materials (Kavčič, 2013). A lack of qualified practitioners combined with builders' mistrust of traditional materials, unwillingness to adapt their working routine and lack of competence in restoring and executing traditional lime façades, means that this work is usually done by restorers. Nevertheless, suitably conserved and restored façades on historic buildings are still more the exception than the rule. The façade on the church in Police is thus one attempt at conserving and restoring a lime-painted façade.
Despite the marked advance in the approach to the structural rehabilitation of cultural heritage properties that could be observed in the case of the restoration of the church in Police, we nevertheless have to draw attention to one further problem that is constantly repeated in renovation projects of this type. The timetables of state-funded projects are not suitable. Once walls have been injected and damp-proofing completed, work on structures should wait until the walls have dried. Only then should we proceed to making the façades and repairing interior plasterwork.
Judging from the serious damage to the plaster and walls of the church in Police, visible even before restoration and construction work began, it was clear that the walls of the church were extremely damp. During structural rehabilitation the nave was systematically injected, a process that introduced additional damp to the walls. Remedial structural interventions included the creation of a horizontal water-repellent barrier, traditional vertical waterproofing and drainage. These measures should have significantly improved the situation as regards damp in the walls. Restoration work on the façade was carried out between May 2018 and June 2019. The work took place in parallel with the structural work. At the conclusion of the restoration work, the lower parts of the walls were still very damp. The consequences of this did not take long to appear. The first repairs had to be carried out while work was still under way in 2019. Damage was visible above all as lifting and flaking of the paint layer, while dark stains were also visible. Damage appeared above all in the ground course of the sanctuary and in the painted frames of the sanctuary windows. The latter were repaired, filled and retouched.
The process of deterioration has nevertheless continued. In 2020 the same types of damage appeared, but on a more extensive scale.

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Dušan Strgar, Dušan Štepec

Vloga in pomen mednarodnega simpozija etnologov konservatorjev ter njegov prispevek k razvoju konservatorske teorije in prakse

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Izvleček

V prispevku so ob dvajsetletnici delovanja mednarodnega simpozija etnologov konservatorjev predstavljeni njegov razvoj, vloga, pomen in rezultati ter prispevek k razvoju konservatorske stroke. V tem času je bilo organiziranih osem simpozijev, štirje v Sloveniji, trije na Hrvaškem in eden v Makedoniji. Na njih je sodelovalo več kot 80 različnih strokovnjakov s področja varstva in ohranjanja kulturne dediščine iz petih držav, ki so razpravljali o aktualnih konservatorskih vprašanjih, problematiki konservatorske teorije in prakse, metodologiji strokovnega dela, prispevkih etnologije v konservatorstvu, konservatorski doktrini, vlogi in pomenu konservatorskega dela v družbi.

Uvod

Mednarodni simpozij etnologov konservatorjev je interdisciplinarno strokovno srečanje konservatorjev in drugih strokovnjakov, raziskovalcev in izvajalcev s področja varstva in ohranjanja kulturne dediščine. Gre za strokovna srečanja z najdaljšo zgodovino tovrstnih prizadevanj na tleh nekdanje Jugoslavije po njenem razpadu v začetku devetdesetih let 20. stoletja, saj kontinuirano potekajo od leta 2000. Zamisel o sodelovanju konservatorjev etnologov Slovenije in Hrvaške je zelo hitro prerasla začetni bilateralni okvir, saj so se na povabilo organizatorjev za sodelovanje na simpoziju zelo hitro odzvali tudi referenti iz Republike Srbije, Severne Makedonije ter Bosne in Hercegovine. V dvajsetih letih, kolikor jih je minilo od organizacije prvega simpozija leta 2000 v Metliki, je bilo organiziranih osem simpozijev, na katerih je več kot 80 različnih strokovnjakov iz petih držav predstavilo več kot 150 referatov. Dvajsetletna kontinuiteta in število sodelujočih referentov iz petih držav ter raznolikost tem, o katerih se je razpravljalo, postavljajo simpozij etnologov konservatorjev med najpomembnejša konservatorska strokovna srečanja na stiku Srednje in Jugovzhodne Evrope. V nadaljevanju prispevka bo predstavljena dvajsetletna zgodovina simpozija, njegovi začetki, razvoj in vsebine ter ključni prispevki k razvoju konservatorske stroke.

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Od ideje do organizacije prvega simpozija

V sedemdesetih in osemdesetih letih 20. stoletja je na posvetih v nekdanji skupni državi potekalo živahno sodelovanje med strokami, tudi med etnologi,[1] ni pa bilo specifičnega posveta, na katerem bi se srečevali etnologi konservatorji in ki bi bil namenjen problematiki varstva t. i. etnološke dediščine oziroma etnološkemu konservatorstvu.[2]

Po razpadu Jugoslavije na začetku devetdesetih let prejšnjega stoletja so se različne stroke začele ponovno povezovati, nekatere prej, druge malo kasneje. Med prvimi, ki jim je to uspelo, so bili etnologi konservatorji. Vojne na Balkanu v prvi polovici devetdesetih let 20. stoletja so prekinile skoraj vse dotedanje stike s kolegi etnologi konservatorji v nekdanjih republikah. Šele leta 1997, na mednarodnem posvetu v Kumrovcu o muzejih na prostem, so med etnologi konservatorji dozorela prva razmišljanja o tem, da bi se stiki lahko ponovno vzpostavili (Strgar 2001: 58).

Ključna prelomnica je bila, ko je hrvaška kolegica Ana Mlinar s konservatorskega oddelka v Zagrebu jeseni 1998 iskala krovca za pokrivanje streh s slamo ter se za informacije in nasvet obrnila na Upravo RS za kulturno dediščino in na novomeški Zavod za varstvo naravne in kulturne dediščine.[3] Za sogovornika je dobila kolega Dušana Strgarja z novomeškega zavoda, ki je imel takrat že izkušnje s prekrivanjem slamnatih streh v muzeju na prostem v Pleterju, kjer je v devetdesetih letih 20. stoletja sodeloval s slamokrovcem Francem Barbičem iz Hrastka pri prekrivanju streh na Kegljevičevi in Baničevi hiši ter toplarju iz Ločne pri Novem mestu in svinjakih iz Javorovice (Strgar 1998). Mlinarjeva in Strgar sta se še istega leta sestala v Zagrebu, na regionalnem konservatorskem oddelku, kjer je delovala Mlinarjeva (Strgar 2001: 28; Mlinar 2003: 12).

Na tem sestanku sta pogovor o mojstrih tradicionalnih obrti in o problematiki v konservatorski stroki sklenila z dogovorom, da bosta poskusila organizirati manjši posvet[4] slovenskih in hrvaških etnologov konservatorjev, ki bi v nadaljevanju spodbudil širše in dolgoročno strokovno sodelovanje konservatorjev etnologov Slovenije in Hrvaške. Njuna ideja je bila predstavljena in sprejeta na delovnem sestanku slovenskih etnologov konservatorjev in muzealcev 3. februarja 1999 v Ljubljani, ki ga je sklicala Zvezda Koželj s takratne Uprave RS za kulturno dediščino. Na tem sestanku je bilo dogovorjeno, da se pripravi strokovni posvet etnologov konservatorjev Slovenije in Hrvaške, na katerem bi udeleženci predstavili uspešne obnove nepremične kulturne dediščine v obeh državah in se pogovorili o nadaljnjem sodelovanju (Strgar 2001: 58).

Pobudo Ane Mlinar in Dušana Strgarja sta obe strani sprejeli in 20. maja 1999 je bil v Ozlju na Hrvaškem organiziran kolokvij z naslovom *Stručni kolokvij očuvanje i obnova zgrada narodnog graditeljstva* (Strgar 2001: 58; Mlinar 2003:12). Na njem so udeleženci sprejeli sklep, da je taka srečanja treba nadaljevati in da je k sodelovanju treba povabiti tudi strokovnjake iz drugih institucij, ki se ukvarjajo z varovanjem in ohranjanjem kulturne dediščine, da s svojim znanjem prispevajo k razvoju konservatorske stroke. Ana Mlinar in Dušan Strgar sta bila zadolžena, da do naslednjega posveta pripravita osnutek dolgoročnega programa sodelovanja slovenskih in hrvaških etnologov konservatorjev.

Njun predlog dolgoročnega programa sodelovanja je bil v razširjeni delovni skupini, poimenovani Iniciativni odbor za organizacijo prvega simpozija etnologov konservatorjev Slovenije in Hrvaške – poleg Mlinarjeve in Strgarja so jo sestavljali še Nada Duić – Kowalsky, Manja Horvat in Zoran Živković iz Uprave Republike Hrvaške za kulturno dediščino, Ksenija Marković s konservatorskega oddelka v Zagrebu, Zvezda Delak – Koželj iz takratne Uprave RS za kulturno dediščino in Dušan Štepec iz Zavoda za varstvo naravne in kulturne dediščine Novo mesto –, dopolnjen in predstavljen na naslednjem posvetu, ki je bil 14. aprila 2000 v muzeju na prostem v Rogatcu (Strgar 2001: 58; Mlinar 2003: 12–13).

Posveta v Rogatcu, kjer je bila tema problematika varstva etnološke nepremične dediščine v muzejih na prostem, so se poleg konservatorjev iz obeh držav udeležili tudi predstavniki Uprave Republike Slovenije za kulturno dediščino in Uprave za varstvo kulturne dediščine Republike Hrvaške. Udeleženci so potrdili izmenično organiziranje simpozijev etnologov konservatorjev obeh držav in dolgoročni program sodelovanja.[5] Sprejeli so predlog dolgoročnega programa sodelovanja in zaključek, da je treba na različnih ravneh razvijati sodelovanje strokovnjakov in ustanov, ki se ukvarjajo z varovanjem nepremične kulturne dediščine. Sprejeta je bila tudi odločitev, da organizacijski odbor v sestavi Ana Mlinar in Ksenija Marković s konservatorskega oddelka v Zagrebu, Dušan Strgar in Dušan Štepec iz Zavoda za varstvo naravne in kulturne dediščine Novo mesto ter Zvezda Koželj iz Uprave RS za varstvo kulturne dediščine še isto leto organizira prvi simpozij etnologov konservatorjev Slovenije in Hrvaške v Sloveniji, in sicer v Metliki. Odbor je nalogo izpolnil, simpozij je v Belokranjskem muzeju v Metliki potekal 9. in 10. novembra 2000 (Strgar 2000: 580; Strgar 2001: 28; Mlinar 2003: 13).

1 Potekala so številna strokovna srečanja v obliki posvetov in konferenc. Med pomembnejšimi velja omeniti na primer 12. mednarodni kongres antropoloških in etnoloških znanosti v Zagrebu leta 1988 in posvet o obnovi stavb v Mariboru leta 1989. Zelo intenzivno sodelovanje med slovenskimi in hrvaškimi etnologi je potekalo tudi na posvetih Etnoloških paralel, na katerih so se z referati predstavili posamezni kolegi etnologi konservatorji.

2 O etnološkem konservatorstvu govorimo šele od šolskega leta 1991/92, ko je bilo kot predmet vključeno v študijski program Oddelka za etnologijo in kulturno antropologijo Filozofske fakultete Univerze v Ljubljani. Predavanja iz predmeta Etnološko konservatorstvo je na oddelku od vsega začetka vodil Vito Hazler, ki je tja prišel z več kot desetletnimi konservatorskimi izkušnjami s takratnega celjskega regionalnega Zavoda za varstvo naravne in kulturne dediščine. Etnološko konservatorstvo je bilo tudi tema njegovega doktorata z naslovom *Podreti ali obnoviti? Zgodovinski razvoj, analiza in model etnološkega konservatorstva na Slovenskem*.

3 Takrat še enovit Zavod za varstvo naravne in kulturne dediščine Novo mesto. Danes je to Območna enota Novo mesto, ki je od leta 2008 sestavni del enovitega Zavoda za varstvo kulturne dediščine Slovenije, s sedežem v Ljubljani.

4 Zamisel je bila, da bi ta posvet postal podlaga za nadaljnje in širše strokovno sodelovanje med konservatorji Slovenije in Hrvaške.

5 Dolgoročni program sodelovanja slovenskih in hrvaških konservatorjev z etnologi in vsemi strokovnjaki v varstveni stroki je bil objavljen v Glasniku Slovenskega etnološkega društva 41/3–4 leta 2001 in v Zborniku radova II. simpozija etnologa konzervatora Hrvatske i Slovenije, ki je izšel leta 2003 v Zagrebu.

Dolgoročni program simpozijev etnologov konservatorjev Slovenije in Hrvaške

Osnovni okvir za delovanje mednarodnega posveta etnologov konservatorjev je dolgoročni program sodelovanja etnologov konservatorjev tako z ostalimi konservatorji kot tudi s strokovnjaki sorodnih ustanov, ki je bil sprejet leta 2000 na posvetu v Rogatcu. V programu so bili definirani osnovni tematski sklopi z vprašanji iz problematike varstva in ohranjanja naravne in kulturne dediščine.

Program obsega šest tematskih sklopov, ki so namenjeni obravnavi konservatorske problematike z različnih vidikov:

1. Problematika stanja in varstva nepremične etnološke dediščine:
- varstvo nepremične etnološke dediščine (definicije in metodologije, vzroki za opredeljeno stanje, potrebni ukrepi za izboljšanje stanja stroke, zakonodaja in stanje dediščine na terenu, predlogi izboljšav),
- konservatorska doktrina (zgodovina varstva, metodologija, varstvena politika),
- vloga etnologov konservatorjev v varstveni dejavnosti (teorija in praksa).

2. Interdisciplinarni in integralni pristop (izobraževanje in študijski programi za konservatorje):
- študijski program konservatorstva,
- implementacija interdisciplinarnega in integralnega pristopa tudi v raziskovanju in praksi na terenu,
- konservatorska praksa in izkušnje,
- specializacije,
- nujnost interdisciplinarnega dela.

3. Etnologija in etnolog ter kulturna identiteta države:
- oplemenitenje kulture vsakdanjega življenja, vključevanje v učni proces in izobraževanje mladih zunaj šolskih dejavnostih ...,
- vloga etnologa v spomeniškovarstveni službi, pri razvoju države, oblikovanju bolj humane družbe in bivalnega okolja,
- kulturna dediščina kot del prezentacije nacionalne kulture (koliko je prisotna in v katerih najpogostejših oblikah, predlogi za nove vidike),
- interpretacija dediščine.

4. Obnova posameznih enot in celot:
- dokumentacija, metode pristopov in modeli,
- problematika obnove dediščine (gradiva, obrtniki, konservatorji, izobraževanje in meddržavna izmenjava materialov in znanja),
- finančna sredstva, sponzorji, davčne olajšave za lastnike in izvajalce,
- namembnost oziroma funkcija, ureditev prostorov, adaptacije itd.,
- izkušnje izobraževalnih centrov,
- reference za mojstre.

5. Mednarodni projekti in tuje izkušnje:
- Krajinski park Kolpa – varstvo z obeh straneh mejne reke Kolpe, Goričko – Prekmurje, Gorjanci – Žumberak, Kozjanski regijski park – Hrvatsko Zagorje, Zagorje, Istra itd.,
- znanstveni projekti (inštituti, fakultete, muzeji itd.),
- ECOVAST, ALPE JADRAN, ICOMOS, PHARE, INTERREG, Norveški finančni mehanizem, evropski fondi itd.,
- izkušnje s posvetov in strokovnih izpopolnjevanj v tujini,
- rezultati, temelječi na izkušnjah tujih normativov varstva dediščine na podeželju (CRPOV, Po poteh dediščine Dolenjske in Bele krajine, ICOM, AEOM itd.),
- izmenjava strokovnjakov.

6. Globalni dosežki varstva naravne in kulturne dediščine v naravnih parkih, na zavarovanih območjih in v naseljih:
- oblike varstva (zakonska regulativa, strokovne osnove prostorskih načrtov),
- finančni in izobraževalni vidiki varstva (interpretacija, prezentacija, popularizacija nepremične etnološke dediščine),
- problematika novogradenj na zavarovanih območjih (dokumentacija, materiali, izhodišča, vloga etnologa pri pripravi programa upravljanja zavarovanega območja (Park prirode Lonjsko polje, Nacionalni park Plitvička jezera, Kozjanski regijski park, Triglavski narodni park, Nacionalni park Paklenica, Regijski park Škocjanske jame, Nacionalni park Pelister, Nacionalni park Kopaonik, Zaštićeni pejzaž Bijambare itd.)),
- izzivi in izkušnje upravljanja kulturne dediščine.

Dolgoročni program sodelovanja je bil prostorsko prvotno osredotočen na konservatorsko problematiko v Sloveniji in na Hrvaškem. Od tod tudi začetno poimenovanje simpozija etnologov konservatorjev Slovenije in Hrvaške.

S postopno vse večjo udeležbo konservatorjev tudi iz ostalih držav nekdanje Jugoslavije pa so stalni člani organizacijskega odbora po letu 2015 začeli razmišljati o načrtni širitvi simpozija tudi v druge države nekdanje Jugoslavije z željo, da bi simpozij dolgoročno postal osrednje mednarodno strokovno in znanstveno konservatorsko srečanje v jugovzhodnem delu Evrope.[6]

Organizacijski odbor se je tako lotil priprave predloga dopolnitev dolgoročnega načrta sodelovanja, v katerega namerava vključiti tudi zaključke 8. simpozija, ki je bil organiziran v Bitoli v Severni Makedoniji oktobra 2019.[7] Razlogov za dopolnitev načrta je več. Na eni strani so ti formalni oziroma organizacijski in so povezani s postopno prostorsko razširitvijo simpozija iz Slovenije in Hrvaške še na ostale države v jugovzhodnem delu Evrope. Na drugi strani pa so razlogi tudi vsebinske narave in so povezani z razvojem konservatorske teorije in varstvene zakonodaje, ki je posledica demokratizacije in participativnega pristopa k varovanju in ohranjanju dediščine.

Upoštevati je treba, da je po letu 2000, ko smo začeli organizirati simpozije, Unesco sprejel več novih konvencij, deklaracij in priporočil, na primer Univerzalno deklaracijo o kulturni raznolikosti (2001), Konvencijo o varovanju nesnovne kulturne dediščine (2003), Jamatsko deklaracijo o celostnem pristopu k varstvu snovne in nesnovne dediščine (2004) in Konvencijo o varovanju raznolikosti kulturnih vsebin in umetniških izrazov (2005). V tem času je nova priporočila sprejel tudi Mednarodni svet za spomenike in območja (ICOMOS), med katerimi velja izpostaviti Deklaracijo o zaščiti duha prostora (2008), Načela ohranjanja industrijske dediščine: prostorov, objektov, struktur in krajin (2011), Načela iz Vallete o varovanju in upravljanju zgodovinskih središč, mest in urbanih območij (2011) in Namursko deklaracijo o smernicah za Evropsko strategijo kulturne dediščine za 21. stoletje (2015).

Poleg tega smo bili v vsem tem času, odkar potekajo simpoziji, soočeni z nekaterimi novimi strokovnimi izzivi, ki jih je posebej izpostavila že Zvezda Koželj v članku Etnolog in celostno ohranjanje kulturne dediščine iz leta 2013. V njem je med ključnimi strokovnimi izzivi poudarila:

»– *varstvo in ohranjanje vsega kulturnega okolja (ne samo kulturnih spomenikov in kulturne dediščine),*
– *celostno ohranjanje kulturne dediščine in kulturne raznovrstnosti (ob varstvu okolja in varstvu človekovih pravic dvoje od štirih antiglobalizacijskih mehanizmov),*
– *raziskave, interpretacije, posredovanje pomenov kulturne dediščine (ne samo klasičnih, temveč tudi aktualnih) v preteklosti in sedanjosti,*
– *komunikacije, mediacijo, trženje, upravljanje, mreženje dediščinskih potencialov (v sodelovanju z lastniki, upravljavci, predstavniki lokalnih skupnosti, državnimi organi, nevladnimi organizacijami itn.) in*
– *trajnostno načrtovanje skladnega regionalnega razvoja ter prostorskega planiranja.«* (Koželj 2013: 210–211)

Poleg teh pa je izpostavila še nekatere poudarke, ki bi jih morali v konservatorstvu po njenem prepričanju bolj upoštevati:

»– dosledno vključevanje lokalnega prebivalstva/lastnikov pri prepoznavanju, razumevanju, vzdrževanju in odločanju v zvezi z dediščino,
– poznavanje dediščine drugih in drugačnih, ki je pomembna prvina medčloveškega razumevanja in spoštovanja,
– nedeljivo obravnavo kulturne dediščine z drugimi področji (tudi t. i. žive) kulture na izbranem prostoru,
– nedeljivo obravnavo naravnih vrednot in kulturne dediščine,
– *nedeljivo obravnavo snovne in nesnovne dediščine.«* (Koželj 2013: 211)

Organizacijski odbor bo omenjene izzive poskušal skupaj z zaključki in spoznanji posameznih simpozijev smiselno vključiti v predlog dopolnitev dolgoročnega načrta.[8]

Po korakih od prvega do osmega simpozija

Prvi simpozij etnologov konservatorjev Slovenije in Hrvaške je bil 9. in 10. novembra 2000 v Belokranjskem muzeju v Metliki.[9] Na njem je bilo predstavljenih enajst referatov, vsebinsko razdeljenih na tri tematske sklope: Problematika stanja in varstva nepremične etnološke dediščine, Obmejni projekti in Mednarodni projekti, ki obravnavajo nepremično etnološko dediščino (Strgar 2001).

Osnovni poudarek simpozija je bil prikazati delo etnologa konservatorja v spomeniškovarstveni službi, primerjalno izpostaviti problematiko varstva naravne in kulturne dediščine v Sloveniji in na Hrvaškem s konkretnim primerom varstva dediščine v Krajinskem parku Kolpa in Parku prirode Lonjsko polje ter predstaviti meddržavne razvojne projekte, ki vključujejo dediščino v turistično ponudbo.

6 Razmišljanje o širitvi simpozija je vzklilo na 6. simpoziju etnologov konservatorjev Slovenije in Hrvaške, ki je bil organiziran leta 2015 v Požegi in Slavonskem Brodu. Dokončno je bila ideja o tem sprejeta leta 2017 na 7. simpoziju etnologov konservatorjev Slovenije in Hrvaške v Krškem. Takrat je bila sprejeta odločitev, da organizacijo 8. simpozija prevzamejo kolegi konservatorji iz Severne Makedonije. Obenem je bila na tem simpoziju tudi prvič izražena ideja organizacijskega odbora, da simpozij dolgoročno preraste v osrednje konservatorsko srečanje v jugovzhodnem delu Evrope.

7 Zaključki 8. simpozija etnologov konservatorjev, ki je bil med 2. in 4. oktobrom 2019 v Bitoli, so navedeni v poročilu, ki sta ga pripravila Dušan Štepec in Dušan Strgar in bo objavljeno v 61. številki Glasnika Slovenskega etnološkega društva.

8 Predlog dopolnitev dolgoročnega programa še ni dokončno oblikovan, zato v prispevku ni objavljen. Cilj organizacijskega odbora je, da pripravi dopolnitve do naslednjega simpozija, ki bo organiziran leta 2021 v Srbiji.

9 Prvi simpozij je pripravil organizacijski odbor v sestavi Ksenija Marković, Ana Mlinar, Dušan Strgar in Dušan Štepec.

Posebej sta bila izpostavljena projekta Po poteh dediščine Dolenjske in Bele krajine in Putevi baštine – s obje strane rijeke Kupe.[10]

Na posvetu v Metliki je bilo sprejetih več zaključkov, med katerimi velja izpostaviti naslednje:

– integralna zaščita je najprimernejši pristop k varstvu naravne in kulturne dediščine na večjih zaščitenih območjih, kot so na primer naravni parki,
– pri obnovi etnološke nepremične dediščine naj se upošteva interdisciplinarni pristop v vseh fazah konservatorskega dela,
– večjo strokovno skrb je treba nameniti arhivskemu dokumentiranju dediščine, saj slednja nezadržno propada in izginja (Strgar 2001; Mlinar 2003: 16).

Drugi simpozij slovenskih in hrvaških etnologov konservatorjev z naslovom Nepremična kulturna dediščina kot resurs gospodarskega razvoja države je potekal od 6. do 8. junija 2001 v Starem gradu pri Paklenici na Hrvaškem.[11] Na njem je sodelovalo okoli 50 strokovnjakov, predstavljenih pa je bilo 26 referatov, vsebinsko razdeljenih v štiri tematske sklope: Študij etnologije in konservatorstva, Mednarodni projekti in domače izkušnje, Revitalizacija tradicionalnih kvalitet ter Pristopi in rezultati varstva nepremične kulturne dediščine v praksi.[12] Med zaključki, ki so bili sprejeti na posvetu, je bila bistvena ugotovitev, da etnološka nepremična kulturna dediščina kljub njeni raznolikosti in bogastvu ni dovolj vključena v turistično ponudbo, saj zaradi pomanjkljivega sistemskega financiranja ni vzdrževana in propada (Mlinar 2003: 19).

Tretji simpozij slovenskih in hrvaških etnologov konservatorjev je potekal med 12. in 14. junijem 2002 v Posavskem muzeju v Brežicah.[13] Program simpozija je bil razdeljen na dva vsebinska sklopa: Delo konservatorja in kustosa ter njuno sodelovanje in Lesena stavbna dediščina – proučevanje, posegi, metode in zaščita lesa. Prvi sklop se je dotaknil teoretičnih vprašanj in problemov, ki so povezani z delom konservatorja in kustosa v praksi, drugi pa je poskušal z različnih zornih kotov osvetliti problem ohranjanja in varovanja lesene stavbne dediščine. Na posvetu, na katerem je bilo predstavljenih 22 referatov, je sodelovalo kar 35 strokovnjakov iz različnih strokovnih institucij, saj sta bili obe temi osvetljeni interdisciplinarno z različnih vidikov. Sprejeta je bila vrsta zaključkov, povezanih s konservatorskimi postopki pri ohranjanju lesene stavbne dediščine.[14] Predavanja so bila objavljena v zborniku, ki ga je uredil Dušan Strgar in je izšel v elektronski obliki.[15]

Četrti simpozij slovenskih in hrvaških etnologov konservatorjev z naslovom Varstvo nepremične kulturne dediščine je potekal od 24. do 27. maja 2010 v Starem Gradu na Hvaru.[16] Na posvetu je bilo predstavljenih 19 referatov v štirih tematskih sklopih: Unesco in tradicionalna kulturna dediščina, Oblike varstva tradicionalne stavbne dediščine, Prostor in nepremična kulturna dediščina kot resurs najnovejših oblik gospodarjenja ter Globalizacijski proces in identiteta prostora. Stari grad na Hvaru je bil za lokacijo simpozija izbran namenoma, saj je bilo njegovo Starogradsko polje leta 2008 uvrščeno na Unescov seznam svetovne dediščine. Omenjeno polje z ohranjeno antično grško delitvijo zemljišč je bilo povod in priložnost za organizacijo simpozija na Hvaru na temo problematike varovanja, ohranjanja in upravljanja Unescove svetovne dediščine na Hrvaškem in v Sloveniji (Mlinar in Čiča 2015).

Referati hvarskega simpozija so bili leta 2015 objavljeni v zborniku, ki sta ga uredila Sanja Buble in Zoran Čiča. V njem so bili objavljeni zaključki, ki so obravnavali devet problemskih vsebin:

– stanje stavbne dediščine,
– pravni, programski in institucionalni okvir delovanja,
– financiranje,
– izobraževanje,
– kadrovsko politiko,
– stroko, prakso in operativo,
– delo z javnostjo, promocijo in izobraževanje,
– oblike varstva in predstavljanja tradicionalne kulturne dediščine ter
– nadaljevanje sodelovanja slovenskih in hrvaških konservatorjev (Buble in Čiča 2015: 229–249).

Peti simpozij slovenskih in hrvaških etnologov konservatorjev je potekal od 9. do 11. oktobra 2013 v Logu v Trenti v

10 Referati prvega simpozija so bili skupaj s poročilom in zaključki objavljeni v Glasniku Slovenskega etnološkega društva leta 2001, saj za objavo v zborniku takrat ni bilo na voljo finančnih sredstev.

11 Drugi simpozij je pripravil organizacijski odbor v sestavi Ksenija Marković, Ana Mlinar, Dušan Strgar in Dušan Štepec.

12 Referati so bili objavljeni v zborniku z naslovom Zbornik radova, II. simpozij etnologa konzervatora Hrvatske i Slovenije, Zaštita i očuvanje tradicijske kulturne baštine, ki je bil izdan leta 2003, uredila pa ga je Ana Mlinar. V njem je bilo objavljeno tudi 17 zaključkov (Mlinar 2003: 313–324). Poročilo z zaključki drugega simpozija je bilo objavljeno tudi v Glasniku Slovenskega etnološkega društva leta 2002 (Strgar, Mlinar, Marković in Štepec 2002).

13 Pripravil organizacijski odbor v sestavi Ana Mlinar, Ksenija Petrić, Dušan Štepec in Dušan Strgar.

14 Poročilo s 16 zaključki je bilo objavljeno v Glasniku Slovenskega etnološkega društva leta 2002 (Strgar, Mlinar, Petrić in Štepec 2002).

15 Dušan Strgar (ur.) (2002): *Zbornik III. simpozija etnologov konservatorjev Slovenije in Hrvaške – SEK 2002.* Brežice: Zavod za varstvo kulturne dediščine Slovenije.

16 Pri organizaciji četrtega simpozija so bile v organizacijskem smislu sprejete novosti, in sicer, da se štirim članom stalnega organizacijskega odbora priključijo še člani gostiteljev simpozija. Organizacijski odbor četrtega simpozija so tako sestavljali štirje stalni člani v sestavi Dušan Strgar, Dušan Štepec, Ana Mlinar in Zoran Čiča, slednji je nadomestil v letu 2007 preminulo kolegico Ksenijo Marković (Petrinec 2007). Dodatni članici organizacijskega odbora gostiteljev pa sta bili Sanja Buble in Ivana Radovani s splitskega regionalnega konservatorskega oddelka.

Triglavskem narodnem parku.[17] Na njem je bilo predstavljenih 29 referatov, ki so bili razporejeni v tri tematske sklope: Etnolog in kulturni antropolog v spomeniškovarstveni službi – njuno mesto, vloga in prispevek k ohranjanju dediščine in razvoju službe, Varstvo kulturne dediščine in njena raba ter Sodelovanje konservatorjev pri skupnih obmejnih projektih varstva dediščine. Referati so bili leta 2015 objavljeni v zborniku, ki ga je uredil Dušan Strgar.[18] Bistvene ugotovitve med desetimi zaključki, ki so bili sprejeti na simpoziju, so bile:

- v varstveni službi je glede na veliko zastopanost etnološke nepremične kulturne dediščine v dediščinskem fondu zaposlenih premalo etnologov,
- etnološka nepremična kulturna dediščine je izjemno ogrožena, propada in izginja, zato jo je treba kontinuirano raziskovati, dokumentirati, analizirati, izsledke pa objavljati,
- obstoječe modele varovanja in ohranjanja kulturne dediščine, ki so se za varovanje etnološke nepremične kulturne dediščine izkazali za neučinkovite, je treba dopolniti z dodatnimi oblikami aktivnega varstva, npr. z muzeji na prostem in ekomuzeji,
- za konservatorje je treba vzpostaviti sistem strokovnega izobraževanja in pri tem dati večjo vlogo in pomen mentorstvu,
- izdelati je treba strokovne standarde za delo v konservatorstvu (Strgar 2015: 255–266; Strgar, Ščukovt, Štepec, Mlinar, Križanić in Čiča 2013).

Šesti simpozij slovenskih in hrvaških etnologov konservatorjev z naslovom Etnološka nepremična kulturna dediščine med odkritjem in pozabo je potekal od 28. do 30. oktobra 2015 v Požegi na Hrvaškem.[19] Na tem simpoziju so prvič sodelovali etnologi konservatorji iz Srbije in Makedonije. Predstavljenih je bilo 21 referatov, ki so bili razdeljeni v štiri tematske sklope: Teoretični in družbeni kontekst konservatorskega dela, Prepoznavanje, vrednotenje in dokumentiranje dediščine – osnova za obnovo in ohranjanje, Zakonodaja, družbene spremembe in memorialna dediščina ter Obnova in ohranjanje tradicionalne dediščine – od konservatorske podlage do predstavitve. Referati so bili leta 2018 objavljeni v zborniku, ki ga je uredil Žarko Španiček.[20]

Med bistvenimi ugotovitvami šestega simpozija je treba omeniti:

- redefinirati in dopolniti je treba Strategijo varstva kulturne dediščine,
- standardizirati je treba kriterije vrednotenja,
- dopolniti je treba sistem pravnega varstva tako, da bo upošteval značilnosti posameznih zvrsti dediščine,
- vzpostaviti je treba enotno metodologijo varstva na zavarovanih območjih naravne in kulturne dediščine,
- nujno je sodelovanje konservatorjev pri načrtovanju dediščinskih turističnih produktov na področju kulturnega turizma zaradi nevarnosti negativne (iz)rabe dediščine (Španiček 2018: 300–305; Španiček, Perkovič, Mlinar, Mijakovac, Štepec in Strgar 2015).

Sedmi simpozij slovenskih in hrvaških etnologov konservatorjev z naslovom Upravljanje s kulturno dediščino: od vrednotenja do interpretacije je potekal v Krškem od 11. do 13. oktobra 2017.[21] Na njem je bilo predstavljenih 20 referatov, ki so bili razdeljeni v dva tematska sklopa: Vrednotenje kulturne dediščine ter Interpretacija in upravljanje kulturne dediščine. Referati so bili leta 2018 objavljeni v zborniku, ki ga je uredil Dušan Strgar.[22] Bistvene ugotovitve simpozija v Krškem so bile:

- v varstveni službi je treba vzpostaviti standardiziran sistem vrednotenja kulturne dediščine, ki mora upoštevati multidisciplinarnost konservatorske stroke,
- kot izhodišče za oblikovanje standardiziranega sistema vrednotenja naj služi vrednostni sistem, ki velja za vrednotenje in upravljanje svetovne kulturne dediščine,
- objektivnost vrednotenja naj se zagotavlja z opisnim in numeričnim vrednotenjem,
- v načrtovanje upravljanja kulturne dediščine naj se vključujejo lokalne in dediščinske skupnosti, njihove naloge in sodelovanje pri upravljanju naj se določijo z upravljavskim načrtom, ki je temeljni in obvezni dokument načrtovanja upravljanja dediščine,
- topografski pregledi posameznih zvrsti dediščine v obliki katalogov in topografij so nujni pripomočki za kakovostno vrednotenje kulturne dediščine,
- motiviranje in ozaveščanje lastnikov dediščine in zainteresirane javnosti je pomembna konservatorska naloga, zato je nujno, da resorno ministrstvo zagotovi dodatno finančno, strokovno in kadrovsko pomoč za pedagoško in promocijsko dejavnost varstvene službe,
- Ministrstvo za kulturo naj z javnimi razpisi spodbuja medinstitucionalno sodelovanje in sodelovanje varstvene službe z lokalnimi in dediščinskimi skupnostmi (Strgar 2018: 277–288; Štepec 2018).

Osmi simpozij etnologov konservatorjev z naslovom Upravljanje kulturne dediščine: od valorizacije do interpretacij je potekal od 2. do 4. oktobra 2019 v Bitoli v Severni Makedoniji.[23] Prisotni so bili predstavniki petih držav: Severne Makedonije, Slovenije, Hrvaške, Srbije ter prvič Bosne in Hercegovine. Na simpoziju je bilo predstavljenih 25 referatov v petih tematskih sklopih: Strategije, načela celostnega ohranjanja in stalno izobraževanje, Revitalizacija dediščine s sredstvi mednarodnih fondov, Status obnovljene kulturne dediščine, interpretacija in perspektiva (odnos skupnosti in stroke do dediščine), Celovito varstvo kot temelj trajnostnega razvoja, Obnovljena dediščina – nova vrednost.[24]

Bistvene ugotovitve udeležencev simpozija v Bitoli so bile:

- ohranjati je treba pestrost tradicionalnega podeželskega prostora v družbenem in krajinskem kontekstu, saj trenutno stanje in perspektiva kulturne dediščine nista ustrezna,
- nujno je izobraževanje vseh udeležencev varstva dediščine,
- kulturna dediščina naj se varuje tudi s pomočjo prostorskih načrtov in z monitoringom,
- finančna sredstva iz evropskih skladov so nova priložnost za obnovo, varstvo in ohranjanje ter interpretiranje dediščine,
- mesto Kruševo in mestno jedro Bitole ustrezata merilom za njuno uvrstitev na nacionalni poskusni seznam Unescove svetovne dediščine, zato naj zavoda in muzeja v Bitoli in v Prilepu pripravita utemeljitvi, ter
- interpretacija dediščine je osnova njene rabe in ustreznega razumevanja (Strgar in Štepec 2020).

Zelo pomemben prispevek zadnjega posveta je bila tudi odločitev organizacijskega odbora, da se simpozij dokončno preoblikuje v osrednje konservatorsko srečanje v jugovzhodnem delu Evrope in da se njegova strokovna raven dvigne na znanstveno, zato so člani odbora k sodelovanju povabili Sanjo Lončar z Oddelka za etnologijo in kulturno antropologijo Filozofske fakultete Univerze v Zagrebu in Nežo Čebron Lipovec z Oddelka za arheologijo in dediščino Fakultete za humanistične študije Univerze na Primorskem. Omenjeni pedagoginji in raziskovalki sta od leta 2020 članici stalnega organizacijskega odbora mednarodnega simpozija etnologov konservatorjev.

Prispevek simpozija k razvoju konservatorske teorije in prakse

V uvodniku zbornika, ki je izšel leta 2018 ob sedmem simpoziju etnologov konservatorjev Slovenije in Hrvaške, je generalni direktor Zavoda za varstvo kulturne dediščine Slovenije Jernej Hudolin ocenil pomen in vlogo simpozijev etnologov konservatorjev z naslednjimi besedami:

»Omenjeni simpoziji presegajo zgolj redna strokovna delovna srečanja konservatorjev ene in druge dežele, saj gre za interdisciplinarno izmenjavo izkušenj, znanj, informacij in prenosa dobrih praks, kar je na področju varstva in ohranjanja kulturne dediščine nujno potrebno. Izjemnega pomena je, da je organizacijski odbor SEK k sodelovanju uspel pritegniti tudi konservatorje iz drugih republik nekdanje skupne države Jugoslavije, znotraj katere smo vse do leta 1991 imeli tesnejše stike in intenzivnejše sodelovanje (npr. Srbija in Makedonija). Temu je gotovo botroval vsebinsko raznolik in interdisciplinarno zasnovan dolgoročni razvojni program, ki si ga je organizacijski odbor zadal že takoj na začetku. Celovit in interdisciplinaren pristop h konservatorski tematiki na posvetih je imel zelo pozitiven odmev tudi pri kolegih konservatorjih iz drugih matičnih ved v varstveni službi, pri kustosih iz muzejev in pri drugih strokovnjakih iz različnih izobraževalnih in raziskovalnih ustanov, kar so potrjevali vsakokrat s svojimi udeležbami na posvetih kot poslušalci ali referenti. Brez dvoma je sistematičen pristop organizacijskega odbora pripomogel h kakovostni izvedbi vseh dosedanjih posvetov, na katerih so bile obravnavane številne aktualne teme in o njih sprejeti zaključki oziroma usmeritve za nadaljnje strokovno delo konservatorjev.« (Strgar 2018: 7)

Po dvajsetih letih delovanja simpozija lahko k njegovi oceni sedaj dodamo še to, da postaja osrednje strokovno srečanje konservatorjev v jugovzhodnem delu Evrope. O tem nas prepričujejo njegov mednarodni značaj, kontinuiteta, vsebina in navsezadnje tudi posamezni statistični podatki.[25]

Dvajsetletna kontinuiteta simpozija je sicer izjemen organizacijski podvig članov organizacijskih odborov,[26] vendar ta ne bi bil možen brez interesa varstvenih služb držav, iz katerih so na posvetih sodelovali strokovnjaki, in brez dobrega meddržavnega sodelovanja ministrstev za kulturo. Simpo-

17 Peti simpozij etnologov konservatorjev je pripravil organizacijski odbor v sestavi Dušan Strgar, Zoran Čiča, Dušan Štepec, Ana Mlinar, Andrejka Ščukovt in Branka Križanić.

18 Dušan Strgar (ur.) (2015): *Simpozij etnologov konservatorjev Slovenije in Hrvaške: varstvo nepremične kulturne dediščine = Zaštita i očuvanje tradicijske kulturne baštine: zbornik V. simpozija etnologov konservatorjev Slovenije in Hrvaške. Triglavski narodni park, INFO središče Dom Trenta, Log v Trenti, 9. 10.–11. 10. 2013.* Novo mesto: Zavod za varstvo kulturne dediščine Slovenije, Območna enota Novo mesto.

19 Šesti simpozij etnologov konservatorjev je pripravil organizacijski odbor v sestavi Žarko Španiček s konservatorskega oddelka v Požegi, Željka Perković in Krešimir Mijakovac, oba s konservatorskega oddelka v Slavonskem Brodu, Ana Mlinar in Zoran Čiča, oba s konservatorskega oddelka v Zagrebu, Dušan Štepec in Dušan Strgar, oba iz Zavoda za varstvo kulturne dediščine Slovenije, Območna enota Novo mesto.

20 Žarko Španiček (ur.) (2018): *Tradicijska kulturna baština izmedu otkića i zaborava = Nepremična kulturna dediščina med odkritjem in pozabo: zbornik radova VI. simpozija etnologa konzervatora Hrvatske i Slovenije, Slavonski Brod, 2015.* Zagreb: Hrvatsko etnološko društvo.

21 Sedmi simpozij etnologov konservatorjev je pripravil organizacijski odbor v sestavi Dušan Strgar in Dušan Štepec iz Zavoda za varstvo kulturne dediščine Slovenije, Območna enota Novo mesto, Boris Mravlje iz Zavoda za varstvo kulturne dediščine Slovenije, Območna enota Ljubljana, Helena Rožman iz Kulturnega doma Krško, Ana Mlinar in Zoran Čiča s konservatorskega oddelka v Zagrebu.

22 Dušan Strgar (ur.) (2018): Zbornik VII. simpozija etnologov konservatorjev Slovenije in Hrvaške: Upravljanje s kulturno dediščino: od vrednotenja do interpretacije = Upravljanje kulturnom baštinom: od valorizacije do interpretacije, Krško, 11. 10.–13. 10. 2017. Ljubljana: Zavod za varstvo kulturne dediščine Slovenije.

23 Simpozij je pripravil organizacijski odbor v sestavi Viktorija Momeva Altiparmakovska, Vesna Kočankovska in Zoran Altiparmakov, vsi z Nacionalnega inštituta zavod in muzej Bitola, Ana Mlinar s konservatorskega oddelka v Zagrebu, Krešimir Mijakovac s konservatorskega oddelka v Slavonskem Brodu, Dušan Štepec in Dušan Strgar, oba iz Zavoda za varstvo kulturne dediščine Slovenije, Območna enota Novo mesto.

24 Referati bodo predvidoma objavljeni v zborniku do konca leta 2020.

25 Na simpozijih je z referati doslej sodelovalo 86 različnih strokovnjakov iz petih držav. Na njih je bilo predstavljenih več kot 170 različnih referatov in sprejetih 88 zaključkov.

26 Da gre za izjemen organizacijski dosežek, je možno oceniti tudi v primerjavi z mednarodnim posvetom, ki ga organizirata Icomos Slovenija in ZVKDS od leta 2014 na Bledu. Z močnejšo organizacijsko ekipo in večjimi finančnimi sredstvi jim je doslej uspelo organizirati tri posvete.

zij je vseskozi moralno in finančno podpiralo vsakokratno vodstvo Zavoda za varstvo kulturne dediščine Slovenije in Uprave za zaštitu kulturne baštine Ministrstva za kulturo Republike Hrvaške.
V nadaljevanju so predstavljeni glavni prispevki simpozija k razvoju spomeniškovarstvene službe ter h konservatorski teoriji in praksi. Zaradi preglednosti so strukturirani po posameznih tematskih sklopih in predstavljeni v dveh skupinah. V prvi skupini so predlogi in usmeritve za izboljšanje strategije varstva kulturne dediščine in organizacije spomeniškovarstvene službe. V drugi skupini pa so predlogi in usmeritve za izboljšanje metodologije strokovnega dela v konservatorstvu.

Prispevki k strategiji varovanja in ohranjanja kulturne dediščine ter organizaciji spomeniškovarstvene službe

Zagotavljanje celovitega varstva kulturne dediščine

Ohranjati je treba pestrost tradicionalnega podeželskega prostora v družbenem in krajinskem kontekstu. Ugotovljeno je bilo, da trenutno stanje in perspektiva kulturne dediščine nista ustrezna.
Tradicionalna podeželska naselja z bivalnimi in gospodarskimi stavbami so zelo pomemben del prostorske in kulturne identitete neke regije (prim. Koželj Delak 1994; Koželj Delak 1995). Njihovo prebivalstvo je varuh materialne in nesnovne dediščine, slednje se kaže v številnih znanjih, veščinah in drugih pojavih duhovne in socialne kulture. Kljub temu so tradicionalna podeželska naselja izpostavljena propadanju zaradi izseljevanja prebivalstva, usmerjenosti družbe k mestom, dolgoletne marginalizacije s strani kulturne, prostorske in gospodarske politike, kar se med drugim odraža tudi v najnižji stopnji financiranja obnove ne le tako imenovane ljudske arhitekture, ampak tudi ostalega stavbarstva vsakdanjega življenja,[27] ter v programih oživljanja vaških jeder in nesnovne dediščine v njih (znanj in veščin). V zavarovanih podeželskih naseljih je treba zagotoviti sodobno komunalno infrastrukturo, šole in vrtce, da bi mlade zadržali na podeželju. V naseljih, v katerih je še ohranjena tradicionalna gradnja iz kamna, opeke, lesa in zemlje, je treba zagotavljati njeno kontinuiteto tudi s pomočjo prostorskih dokumentov, saj lahko tovrstna tradicionalna gradnja bistveno prispeva k vzdržnemu razvoju. Na širših zavarovanih območjih (npr. naravni parki), kjer gre za preplet naravne in kulturne dediščine, pa je treba dosledneje zagotavljati integralno varstvo, kar je pogoj za enakomerno varovanje naravnih in kulturnih vsebin ter za kakovostno bivanje ljudi na teh območjih in za vzdržen gospodarski razvoj.

Zaustavitev propadanja nepremične kulturne dediščine

Stavbarstvo vsakdanjega življenja, s katerim se po večini ukvarjajo etnologi konservatorji, je izjemno pomemben del kulturne identitete vsake države. Stavbe so praviloma slabo vzdrževane, pogosto so prazne in propadajo. Stavbarstvo vsakdanjega življenja predstavlja najštevilčnejšo zvrst nepremične kulturne dediščine in je hkrati tudi njen najbolj ogroženi del. Zaradi vse hitrejšega razvoja, spremenjenega načina bivanja in gospodarjenja ter neučinkovitih ukrepov varstva tovrstna stavbna dediščina najhitreje propada in izginja.[28] Pristojno ministrstvo mora zato nujno zagotoviti sistemska in interventna finančna sredstva za njeno obnovo, prezentacijo in interpretacijo. Da bi zaustavili propadanje tovrstne dediščine, je treba poleg njenega klasičnega varovanja na mestu nastanka (*in situ*) v konservatorski praksi čim prej uveljaviti tudi dopolnilne oblike varovanja, kot so muzeji na prostem in ekomuzeji. Slednji opravljajo pomembno vlogo pri ohranjanju in popularizaciji kulturne dediščine, zato morajo biti vključeni v sistemsko in institucionalno varstvo ter postati del strategije varstva kulturne dediščine (prim. Štepec, Hazler, 2018: 111). Sistemskemu reševanju varstva kulturne dediščine s pomočjo muzejev na prostem in ekomuzejev je bil posvečen mednarodni kolokvij, ki je bil pod naslovom Muzeji na prostem in ekomuzeji kot izziv sodobnemu varstvu in popularizaciji kulturne dediščine – primer Dežele kozolcev organiziran v Šentrupertu na Dolenjskem 31. marca 2014.[29]

27 V etnologiji govorimo o stavbarstvu vsakdanjega življenja; to obsega vse sestavine stavbarstva, ki so predmet zgodovinskih raziskav z etnološkega zornega kota, in sicer pri vseh družbenih in poklicnih skupinah, v vseh geografskih okoljih in v vseh obdobjih (Hazler, 2004: 579; Koželj Delak, 2008: 51).

28 Etnološka stavbna dediščina sodi med najbolj ogroženo zvrst nepremične kulturne dediščine v Sloveniji. Na podlagi posameznih analiz stanja na terenu ugotavljamo, da v Sloveniji v 10 letih propade povprečno kar 16 odstotkov registrirane etnološke stavbne dediščine. Podobno ali še slabšo oceno smemo tvegati tudi za države na območju nekdanje skupne države Jugoslavije, kjer se poleg uničenja, propadanja in slabega vzdrževanja dediščine srečujejo še z neustreznimi primeri njenega ohranjanja v obliki tako imenovanih etno hiš ter z nedovoljenim izvažanjem stavbne dediščine in njenih sestavnih delov v tujino za opremljanje turističnih kmetij in gostinskih lokalov.

29 Kolokvij v Šentrupertu je bil organiziran na podlagi enega od zaključkov 5. simpozija, da se o posamezni problematiki, za katero se je na simpoziju izkazalo, da bi jo bilo treba obravnavati posebej, organizira med enim in drugim simpozijem poseben eno- ali dvodnevni posvet (kolokvij). Prvi takšen kolokvij je bil organiziran v Šentrupertu na Dolenjskem leta 2014 na temo muzejev na prostem in ekomuzejev, ki ga je pripravil programsko-organizacijski odbor v sestavi Zoran Čiča, Vito Hazler, Ljubo Lah, Alenka Lamovšek, Ana Mlinar, Urša Repše, Dušan Strgar in Dušan Štepec.

Povezovanje in sodelovanje med ministrstvi

Obstoječi ukrepi varovanja in ohranjanja kulturne dediščine niso dovolj učinkoviti, da bi zaustavili intenzivnost propadanja posameznih zvrsti dediščine, med katerimi je najbolj ogrožena etnološka nepremična kulturna dediščina. Ukrepi varstva kulturne dediščine posameznih ministrstev niso medsebojno usklajeni in ustrezno vgrajeni v zakonodajo. Tako na primer pravno varstvo dediščine ni podprto z davčnimi olajšavami in drugimi finančnimi podporami za lastnike dediščine. Posebnost varovanja in ohranjanja kulturne dediščine ni dovolj vključena v prostorsko in gradbeno zakonodajo itd. Obstoječo zakonodajo je treba dopolniti in poenotiti tako, da bo lahko učinkovito podpirala strategijo varstva in ohranjanja kulturne dediščine. Zaradi slabega medresorskega povezovanja in sodelovanja je zakonodaja neusklajena, kar je za področje varovanja in ohranjanja kulturne dediščine nesprejemljivo. Obvezna in nujna je boljša sinhronizacija dela med ministrstvi, še posebej med ministrstvi, pristojnimi za kulturo, za vzgojo in izobraževanje, za okolje in prostor, za kmetijstvo, za gospodarstvo in za finance.

Finančna sredstva za obnovo dediščine

Neposrednih državnih finančnih spodbud za lastnike kulturne dediščine ni, za lastnike kulturnih spomenikov pa so iz leta v leto skromnejše. Finančna sredstva iz evropskih skladov ne zagotavljajo pokritja tega manka. Med najranljivejšimi so socialno ogroženi lastniki nepremične kulturne dediščine, zato ti brez državnega sofinanciranja niso zmožni dediščino oz. kulturne spomenike vzdrževati ali obnavljati. Ugotavljamo, da sofinanciranje obnove kulturnih spomenikov iz javnih razpisov ni učinkovito, saj so sredstva, ki so temu namenjena, občutno prenizka, poleg tega pa so bila nesorazmerno razporejena glede na številčno zastopanost posamezne zvrsti kulturnih spomenikov in glede na njihov pomen. Ministrstvo za kulturo naj v prihodnje z javnimi razpisi zagotovi več javnih sredstev za sofinanciranje obnove kulturnih spomenikov, prijavne pogoje v javnih razpisih pa naj oblikuje tako, da bodo do finančnih sredstev enakovredno prihajali lastniki vseh zvrsti spomenikov in lastniki najpomembnejših spomenikov v državi. Za lastnike kulturne dediščine naj Ministrstvo za kulturo in Ministrstvo za finance zagotovita davčne olajšave in druge ukrepe, s katerimi bosta spodbudila lastnike kulturne dediščine k njenemu ohranjanju in obnovi. Za reševanje najbolj ogrožene dediščine v državi mora Ministrstvo za kulturo zagotavljati interventna sredstva na letni ravni oziroma ustanoviti poseben fond ali javni sklad za (so)financiranje najbolj ogrožene dediščine.[30]

30 Ne sme se dogajati, da pred očmi strokovne in laične javnosti propadajo najpomembnejši kulturni spomeniki v državi, ker ni na voljo interventnih sredstev za zaustavitev njihovega propadanja.

Kadrovska politika

Razvoj konservatorstva, slabo fizično stanje dediščine na terenu in obstoječa kadrovska zasedba v spomeniškovarstveni službi zahtevajo spremembo kadrovske politike v smeri novih zaposlitev oziroma povečanja števila posameznih manjkajočih profilov strokovnjakov, med katerimi je največje pomanjkanje etnologov in kulturnih antropologov, zgodovinarjev, strojnih in gradbenih inženirjev, arhitektov in gradbenih tehnikov.[31] Zato morajo odgovorni v spomeniškovarstvenih službah v sodelovanju s pristojnimi ministrstvi več pozornosti posvetiti kadrovski politiki in načrtovanju pomladitve strokovnega kadra v smislu zagotavljanja interdisciplinarnosti in kontinuitete prenosa znanja od starejših konservatorjev na mlajše. Slednje je še posebej pomembno, saj se konservator ne izoblikuje z diplomo, ampak se razvije šele z leti, z izkustvenim učenjem med konservatorsko prakso. S tega vidika je treba izboljšati programe pripravništva in izpopolnjevanja z interdisciplinarnimi vsebinami, mentorstvu pa dati večji pomen in vlogo pri izobraževanju kadrov, kot ga ima zdaj.

Interdisciplinarni študij konservatorstva

Obstoječi študijski programi na prvi in drugi stopnji univerzitetnega študija ne omogočajo dovolj izkustvenega učenja, ki je za delo v konservatorstvu izjemno pomembno. Zato naj se v pedagoške procese vključijo tudi konservatorji s praktičnimi izkušnjami. Na ravni doktorskega študija je treba zagotoviti učinkovito delovanje interdisciplinarnega študijskega programa konservatorstva. Podpirati je treba tudi vse druge oblike izobraževanja konservatorjev na domačih in tujih univerzah (študij, tečaji) ter njihovo sodelovanje na posvetih in konferencah, saj so tudi ti priložnost za pridobivanje novih znanj in izmenjavo izkušenj.

Vključevanje vsebin varovanja in ohranjanja kulturne dediščine v vzgojno-izobraževalne programe osnovnih in srednjih šol

Splošna ozaveščenost o pomenu varovanja in ohranjanja kulturne dediščine je med lastniki in uporabniki dediščine še vedno nizka, zato je treba o tem načrtno vzgajati že najmlajše člane družbe v osnovnošolskih in srednješolskih vzgojno-izobraževalnih programih.
Ocenjeno je bilo, da se o dediščini in njeni obnovi nezadostno

31 Demokratizacija dediščine v smislu pluralizacije in pooblaščanja nosilcev dediščine je za varstvene službe izziv, na katerega z obstoječo pomanjkljivo kadrovsko strukturo ne zmorejo učinkovito in uspešno odgovarjati. Evidentno je pomanjkanje etnologov in kulturnih antropologov, gradbenih tehnikov, pedagoških profilov, strojnih inženirjev, zgodovinarjev ...

izobražuje tako v osnovnih in srednjih šolah kot v visokošolskih izobraževalnih ustanovah, zato je treba v šolske učne načrte vključiti vsebine o dediščini, da bi jo učenci lahko bolj cenili, jo ohranjali, pravilno uporabljali in ustrezno interpretirali. V šolske predmetnike je treba vključiti vsebine, ki bodo v učencih spodbudili pozitiven odnos do naravnih znamenitosti in kulturne dediščine, ljubezen do podedovanega ter odgovornost do podedovane dediščine in skrb za njeno varovanje. Tudi konservatorji se morajo zavedati javnosti svojega strokovnega dela, zato naj s predavanji, pogovori in drugimi oblikami sodelovanja posredujejo vrednoto varovanja in ohranjanja kulturne dediščine vsem družbenim skupinam, še posebej najmlajšim, šoloobveznim otrokom in srednješolskim mladostnikom, ter na ta način poskušajo prispevati k dvigu ozaveščenosti v družbi.

Strokovno izobraževanje in izpopolnjevanje strokovnjakov in izvajalcev na področju obnove kulturne dediščine.

V konservatorstvu je občutno pomanjkanje možnosti načrtnega izobraževanja in izpopolnjevanja za konservatorje, druge strokovnjake, obrtnike, lastnike in uporabnike dediščine ter druge zainteresirane na področju obnove kulturne dediščine. Na državni ravni je treba zagotoviti delovanje učno-izobraževalnih centrov za izvajanje delavnic za obnovo dediščine s področja kamnoseštva, tesarstva, zidarstva, krovstva, kleparstva, slikopleskarstva ..., torej za vse obrti, ki so najpogosteje zastopane pri obnovi dediščine. Tovrstni centri naj bodo namenjeni organizaciji izkustvenih delavnic in tečajev za izpopolnjevanje zainteresiranih na področju obnove kulturne dediščine. Ugotavljamo namreč, da bodo brez usposobljenih izvajalcev (obrtnikov) z znanjem tradicionalnih gradbenih tehnik ter poznavanjem rabe in obdelave gradiv vsa prizadevanja za varstvo kulturne dediščine dolgoročno neuspešna. Na ravni države je treba zagotoviti seznam usposobljenih izvajalcev na področju obnove kulturne dediščine. Sistemsko je treba zagotoviti finančne in druge pogoje za kontinuiran prenos njihovega znanja na mlajše generacije.

Raba kulturne dediščine v skladu z načeli stroke

Na terenu smo pogosto priča neustreznemu izkoriščanju (eksploataciji) kulturne dediščine v turizmu, kar je posledica nizke ozaveščenosti, slabega znanja in nepoznavanja pomena ekonomskega, socialnega in družbenega potenciala kulturne dediščine s strani načrtovalcev turističnega razvoja in produktov. Konservatorji moramo opravljati svoje delo v dialogu z lastniki kulturnih spomenikov in dediščine ter vso zainteresirano javnostjo, zato je pomembno, da z njimi vzdržujemo stalno komunikacijo in jim v različnih oblikah posredujemo naša znanja in vedenja (npr. pogovori, okrogle mize, predavanja ...) ter jih na ta način ozaveščamo o pomenu varstva in ohranjanja dediščine. Za izboljšanje stanja je treba poskrbeti za upravljavske in interpretacijske načrte za upravljanje in interpretiranje objektov in območij dediščine. Vzpostaviti je treba redno in kontinuirano sodelovanje s turističnim sektorjem in mu nuditi strokovno pomoč pri vključevanju dediščine v turistične produkte. Potenciali kulturne dediščine naj bodo vključeni tudi v druge gospodarske panoge, npr. v kmetijstvo, kjer je veliko sinergijo možno pričakovati z muzeji na prostem in ekomuzeji pri promoviranju ohranitve/revitalizacije kmečkega podeželja in njegovega vzdržnega razvoja.

Prispevki k metodologiji strokovnega dela v konservatorstvu

Zagotavljanje celovitega in celostnega varstva kulturne dediščine

V konservatorstvu so evidentni neuravnoteženi varstveni interesi, razpršeni po klasičnih vrtičkih posameznih matičnih strok. Zaradi tega se kulturna dediščina pogosto ne obravnavana celovito, tj. v vseh njenih pojavnih oblikah in z vsemi pritiklinami, od kleti do podstrešja. Prav tako pogosto ni obravnavana interdisciplinarno, z različnih vidikov, ki jih lahko prispevajo matične stroke, ki so zastopane v spomeniškovarstveni službi. Zato naj se etnologi-konservatorji ne ukvarjajo več le s tradicionalno določeno kmečko stavbno dediščino, ampak naj se bolj intenzivno vključujejo tudi v trški in mestni prostor ter uveljavljajo interdisciplinarni varstveni pristop. Etnologe-konservatorje je treba vključevati v obravnavo vseh zvrti dediščine.

Zagotavljanje enotnega strokovnega dela v konservatorstvu

Strokovne standarde v konservatorstvu, ki so jih oblikovale posamezne matične stroke,[32] je treba poenotiti. Nujna je izdaja temeljne konservatorske literature, na primer temeljnega uvoda v konservatorstvo in terminološkega leksikona konservatorstva. Tovrstna temeljna literatura bo pomenila bistven prispevek h kritičnemu teoretskemu razmisleku o razvoju konservatorstva, njegovi aktualni vlogi v sodobni družbi, trenutnem stanju in izzivih v prihodnosti, k poenotenju praktičnega strokovnega dela in k razumevanju konservatorstva s strani drugih strok. Fokus konservatorske obravnave naj ne bo več na zvrsteh dediščine, ki naj jo ekskluzivno obravnava samo določena matična stroka, temveč na interdisciplinarnih vidikih njene obravnave, ki jih prispeva vsaka posamezna matična stroka s svojimi metodami dela.

32 Na področju etnološkega konservatorstva je treba omeniti zlasti prispevke Vita Hazlerja in Zvezde Koželj. Med temeljnimi Hazlerjevimi prispevki o strokovnih standardih za delo etnologa v spomeniškovarstveni službi naj omenimo članek z naslovom Predlog standardov za delo etnologov v spomeniškem varstvu (Hazler 1998) in delo z naslovom Podreti ali obnoviti? Zgodovinski razvoj, analiza in model etnološkega konservatorstva na Slovenskem (Hazler 1999). Med prispevki Zvezde Koželj sta pomembna članek z naslovom Programski model etnologa konservatorja (Koželj 2008) in delo z naslovom Etnologija in varstvo naravne in kulturne dediščine (2009).

Sistem vrednotenja dediščine

Vrednotenje dediščine je pomembna strokovna naloga konservatorjev, zato je v spomeniškovarstveni službi treba merila vrednotenja oblikovati kot strokovni standard, ki bo upošteval multidisciplinarnost konservatorske stroke. Izhodišče za oblikovanje sistema vrednotenja naj bo vrednostni sitem, ki velja za vrednotenje in upravljanje svetovne kulturne dediščine, ob njem pa naj se upoštevajo tudi specifična merila posameznih strok, ki so zastopane v spomeniškovarstveni službi. Ob tem se je treba zavedati, da je vrednotenje subjektivno. Kot pomoč pri objektivizaciji vrednotenja naj se poleg opisnega uporablja tudi numerično vrednotenje v obliki numerične matrike, to je vrednotenje s pomočjo točk, ki omogoča primerjalno vrednotenje dediščine.

Usmeritve za zagotavljanje avtentičnosti pri obnovi lesene stavbne dediščine

Avtentičnost obnove lesene stavbne dediščine naj se zagotavlja s predhodnimi dendrokronološkimi in kemijskimi raziskavami lesa, s katerimi se ugotavljajo vrsta lesa, njegova starost, vrsta in stopnja poškodbe. Zagotoviti je treba natančno arhitekturno dokumentiranje vseh posegov na leseni stavbni dediščini, saj se zaradi patiniranosti lesa čez čas novi posegi na stavbi ne vidijo več. Novega lesa, s katerim nadomestimo starega in dotrajanega, ni treba kemijsko zaščititi proti delovanju črvov ali vremenskim in klimatskim vplivom. Prav tako ga ni treba barvno tonirati, saj bo čez čas sam patiniral. Če je nujno in utemeljeno, naj se trhli deli lesa impregnirajo z utrjevalnimi sredstvi. Nujno pa je, da izberemo les iste vrste in da ga obdelamo na enak način, kot je obdelan originalni les.

Raziskovanje posameznih zvrsti dediščine in publiciranje raziskav

Splošna ugotovitev je, da v konservatorski stroki primanjkuje temeljnih raziskav posameznih zvrsti stavbne dediščine. Nujne so njihove topografske in monografske obdelave. Dobro raziskana dediščina je temelj vseh nadaljnjih konservatorskih postopkov, zato je raziskovalno, analitično in publicistično delo v spomeniškovarstveni službi izjemnega pomena. Urgentno je treba celovito in celostno raziskati in analizirati tiste zvrsti stavbne dediščine, ki jim zaradi izgube namembnosti in sodobne rabe grozi dokončen propad. Tovrstne publikacije potrebujejo poleg konservatorjev tudi drugi strokovnjaki na področju varovanja in ohranjanja stavbne dediščine, načrtovalci posegov v prostor, delavci v turizmu, vzgoji in izobraževanju ter še kdo.

Interpretacija dediščine kot podlaga njenega ustreznega razumevanja in njene funkcije

Ob izobraževanju o dediščini in njenem sprotnem razumevanju je treba načrtovati tudi interpretacijske vsebine in način interpretacije, ki mora biti pravilno zasnovan na dejstvih, saj zahteva predstavitev celovite slike življenja in gospodarjenja, tako da ju obiskovalec razume. Zato je treba težiti k čim bolj kompletnim prezentacijam tudi z uporabo sodobnih orodij.
V skladu s tem je potrebna večja popularizacija stroke in rezultatov dela tako na lokalni ravni kot širše. V sodobnosti postaja to eno najpomembnejših dejavnosti službe, ki pa še ni dovolj vključena v vsakdanje strokovno delo. Vsekakor bo potreben močnejši, prodornejši in učinkovitejši pristop k ustreznejši in celovitejši interpretaciji.

Vzpostavitev mreže terenskih konservatorskih sodelavcev

V spomeniškovarstveni službi je treba nameniti pozornost tudi posameznikom, ki skrb za ohranjanje kulturne dediščine pojmujejo kot posebno vrednoto in s svojim delom prispevajo k dvigu zavesti o njenem varovanju in ohranjanju ali si s svojim delom prizadevajo za njeno obnovo. Ti posamezniki so na terenu izjemni sodelavci konservatorjev oziroma so njihovi zaupniki. So vezni člen med lastniki dediščine in konservatorsko službo, opravljajo mediatorsko vlogo, obveščajo konservatorje o posegih na terenu, ljubiteljsko raziskujejo kulturno dediščino, zbirajo gradiva o njej in ozaveščajo javnost o pomenu njenega varovanja in ohranjanja. Treba jih je povezati, jim omogočiti interna izobraževanja in jih formalno vključiti v varstveno dejavnost, saj so pomembni informatorji o stanju dediščine in posegih na njej na terenu in o potrebah po nujnih intervencijah.

Upravljanje dediščine

Pri načrtovanju upravljanja kulturne dediščine je treba spodbujati vključevanje lokalnih in dediščinskih skupnosti, ki ohranjajo lastno dediščino, saj z njo dejansko živijo in

so pomemben povezovalec stroke in lastnikov dediščine. Varstvo in ohranjanje kulturne dediščine je namreč skrb vseh, ne samo javne službe za varstvo kulturne dediščine. Lokalne in dediščinske skupnosti je treba vključevati v proces obnove dediščine v javni lasti že takoj na začetku, v fazi načrtovanja vsebin in posegov, ter jih obravnavati kot enakopravne partnerje, upoštevati njihove želje in interese, da bo dediščina po obnovi znotraj lokalne skupnosti lahko tudi zaživela.

Problematika vključevanja novih spoznanj v konservatorsko prakso

Eden od pomembnih ciljev simpozija etnologov konservatorjev je, da bi spoznanja in zaključki prispevali k boljši organizaciji in strokovnosti spomeniškovarstvene stroke. To je zahteven in dolgotrajen proces, saj je odvisen od izvajanja politike varstva kulturne dediščine v posamezni državi ter od vizije in ambicij vsakokratnih nacionalnih vodstev spomeniškovarstvenih služb. Implementacija je namreč tesno povezana z varstveno zakonodajo in pravilniki, s strategijo varstva kulturne dediščine in med drugim tudi z uvajanjem načel odličnosti ter različnih orodij kakovosti oz. z menedžmentom kakovosti.[33] V organizacijskem odboru se tega od vsega začetka zavedamo, zato si ves čas prizadevamo, da redno in dosledno posredujemo vsa spoznanja in zaključke vsakega simpozija vsem pristojnim resornim ministrstvom, strokovnim službam in našim vodjem, od katerih pričakujemo, da poskrbijo za ustrezno verifikacijo in implementacijo.
Po dvajsetih letih lahko ugotovimo, da je rezultatov manj, kot bi si želeli.[34] Kljub vsemu pa nekaj premikov v slovenski konservatorski praksi vendarle beležimo in jih lahko bolj ali manj neposredno pripišemo našim prizadevanjem na simpozijih, to so npr. začetek sistematičnega oblikovanja strokovnih standardov, sprejetje muzeja na prostem kot dodatne oblike varstva (premične, nepremične in nesnovne) kulturne dediščine, uveljavljanje tradicionalnih tehnologij pri obnovi kulturne dediščine in oblikovanje metodologije konservatorskih postopkov pri obnovi lesene stavbne dediščine.
S simpozijem nam je uspelo spodbuditi strokovno vodstvo k začetku priprav strokovnih standardov.[35] Na njihovo potrebo smo v okviru simpozija prvič opozorili konec leta 2002 (Strgar, Mlinar, Petrić in Štepec 2002: 35), nato leta 2013, ko smo med drugim obravnavali temo mentorstva v spomeniškovarstveni službi (Strgar 2015: 259), in nato še leta 2015, ko smo obravnavali sistem vrednotenja kulturne dediščine (Španiček 2018: 303). Omenjeni zaključki, povezani s strokovnimi standardi, so bili predstavljeni na strokovnem svetu zavoda leta 2016, kar je posledično privedlo do sprejetja prvih internih navodil za izvajanje javne službe ZVKDS, tj. *Protokola postopkov vodenja in odločanja pri reševanju strokovnih konservatorskih vprašanj* (2018).[36]

Pomemben vpliv simpozija in njegovih zaključkov je bil na področju načrtovanja in izvajanja konservatorskih posegov v muzejih na prostem. Eden od zaključkov, ki je bil sprejet na simpoziju v Trenti leta 2013, je bil, da je treba obstoječe modele varstva kulturne dediščine nadgraditi in dopolniti z ostalimi oblikami aktivnega varstva, in sicer z muzeji na prostem in ekomuzeji (Strgar 2015: 259). Na podlagi tega je bil leta 2014 v Šentrupertu na Dolenjskem organiziran mednarodni kolokvij z okroglo mizo z naslovom *Muzeji na prostem in ekomuzeji kot izziv sodobnemu varstvu in popularizaciji kulturne dediščine – primer Dežele kozolcev*. Na tem kolokviju so bila sprejeta konkretna priporočila za načrtovalce kulturne politike na ravni države in lokalnih skupnosti, naj se muzeji na prostem in ekomuzeji vključijo v prihodnjo strategijo varstva kulturne dediščine kot dodatna oblika varstva in popularizacije kulturne dediščine (Štepec in Hazler 2018: 8). Kot rezultat simpozija posebej izpostavljamo prizadevanja za uveljavitev tradicionalnih tehnologij pri obnovi kulturne dediščine. Prvo razmišljanje o sistematični ureditvi tega področja sega v začetek devetdesetih let 20. stoletja, ko se je v okviru delovne skupine etnologov konservatorjev na pobudo Vita Hazlerja leta 1993[37] začel sestavljati prvi seznam referenčnih izvajalcev, ki še obvladajo tradicionalne tehnologije. Zato ne preseneča, da je bil povod za začetek simpozijev etnologov konservatorjev ravno konkreten primer iskanja slamokrovca hrvaške kolegice Ane Mlinar pri Dušanu Strgarju v Novem mestu (Strgar 2001: 58). Problematika usposobljenih izvajalcev za delo na kulturni dediščini in vzpostavitev njihovega preglednega seznama sta zato postali stalnica vseh simpozijev, saj je ta tema vključena v dolgoročni program sodelovanja slovenskih in hrvaških etnologov konservatorjev od vsega začetka. Prvič je bila problematika izpostavljena na simpoziju v Brežicah leta 2002, na katerem je bil sprejet zaključek, naj »Ministrstvo za kulturo v sodelovanju s spomeniško službo kot prioritetno nalogo v čim krajšem času pripravi pravilnik za izdajo dovoljenj (licenc) za delo na dediščini« (Strgar, Mlinar, Petrić in Štepec 2002: 36). Do transparentnega in preverljivega seznama usposobljenih izvajalcev za delo na kulturni dediščini v varstveni službi doslej kljub vsem prizadevanjem še nismo prišli.[38] Nam je pa uspelo v sistemu nacionalnih poklicnih kvalifikacij opredeliti poklicne standarde in kataloge strokovnih znanj in spretnosti za osem poklicev na področju tradicionalnih poklicev, ki najpogosteje nastopajo pri obnovi kulturne dediščine.[39]
Na koncu naj kot rezultat simpozija izpostavimo še uveljavitev metodologije konservatorskih postopkov pri obnovi lesene stavbne dediščine. Ta tema je bila izpostavljena na drugem simpoziju etnologov konservatorjev v Brežicah leta 2002. V zaključkih brežiškega simpozija so bile sprejete pomembne usmeritve glede konservatorskih postopkov pri obnovi lesene stavbne dediščine (Strgar 2002: 160–161), ki so bile v konservatorski praksi dosledno upoštevane pri postavitvi muzeja na prostem v Šentrupertu v letih 2010–2013 (prim. Štepec in Lah 2018: 176).

Zaključek

Mednarodni simpozij etnologov konservatorjev se je v dvajsetletnem obdobju svojega delovanja razvil v edino strokovno konservatorsko srečanje, ki načrtno kontinuirano povezuje strokovna spoznanja, znanja in izkušnje konservatorjev in drugih strokovnjakov na področju varovanja in ohranjanja kulturne dediščine v državah, ki so nastale iz nekdanje Jugoslavije, ter omogoča njihovo izmenjavo. S tem, ko je presegel začetno bilateralno sodelovanje med slovenskimi in hrvaškimi konservatorji etnologi in se je postopoma razširil še na Srbijo, Severno Makedonijo ter Bosno in Hercegovino, se razvija v osrednje konservatorsko srečanje v jugovzhodnem delu Evrope.
V ospredju teh strokovnih srečanj je ves čas poudarek na problematiki uveljavljanja etnološkega konservatorstva, ki ima v Sloveniji od vseh držav na obravnavanem prostoru najdaljšo in najmočnejšo tradicijo.[40] Nikjer drugje v spomeniškovarstveni službi ne deluje toliko etnologov kot v Sloveniji, ki se z uspešnim delom dokazujejo v domačem in mednarodnem prostoru.[41]

33 Medtem ko so varstvena zakonodaja, pravilniki in strategija odvisni od kulturne politike, pa je menedžment kakovosti odvisen predvsem od prizadevanj vodstva ZVKDS. V tem segmentu lahko vodstvo ZVKDS naredi največ tudi na primer glede vključevanja novih spoznanj in zaključkov v konservatorsko prakso. Pod pojmom menedžment kakovosti razumemo uvajanje različnih načinov in modelov ugotavljanja kakovosti in učinkovitosti v organizaciji (npr. EFQM – European Foundation for Quality management, model CAF – Common Assessment Framework ...), s katerimi lahko uresničujemo cilje, kot so povečanje zadovoljstva strank in zaposlenih, izboljšanje uspešnosti in učinkovitosti, obvladovanje stroškov, izboljševanje procesov in preglednost delovanja, dvig ugleda ter prepoznavnost (prim. Udovč 2016: 21–23).

34 Razlogov, da nova spoznanja in zaključki simpozija niso bili implementirani v konservatorsko prakso v večjem obsegu, je več, eden od teh je tudi, da vodstvu ZVKDS ni uspelo slediti standardom na področju upravljanja in izboljševanja organizacije, saj je bilo to področje do nedavnega ocenjeno kot podpovprečno (prim. Udovč 2018: 61).

35 *Navodila (1–6) za izvajanje strokovnega dela ZVKDS*, prvi strokovni standardi za izvajanje strokovnega dela na Zavodu za varstvo kulturne dediščine Slovenije po začetku centralizacije službe leta 1999, so bili pripravljeni že leta 2002. Pripravil jih je Janez Mikuž, takratni svetovalec programskega direktorja, 10. decembra 2002 pa jih je potrdil strokovni svet Zavoda za varstvo kulturne dediščine. Navodila obsegajo usmeritve za imenovanje odgovornih konservatorjev/restavratorjev in delovnih skupin za delo s kulturnimi spomeniki državnega pomena ter opredelitev njihovih nalog, za izdelavo ocene stanja kulturnega spomenika, za izdelavo projektne naloge za posege v kulturni spomenik, za izdelavo arhitektonskih posnetkov objektov kulturne dediščine, za izdelavo konservatorsko-restavratorskega programa za posege v kulturni spomenik in za določitev gradbeno-restavratorskih faz v procesu obnove kulturnih spomenikov.

36 Dušan Štepec je problematiko strokovnih standardov izpostavil na 3. redni seji strokovnega sveta ZVKDS (8. decembra 2016), in sicer v povezavi s predlogom protokola za sprejemanje strokovnih odločitev pri reševanju strokovnih konservatorskih vprašanj, ter spodbudil takratnega predsednika strokovnega sveta dr. Mateja Klemenčiča, da je problematiko uvrstil na dnevni red 1. redne seje, ki je bila organizirana 12. januarja 2017.

37 Dopis Zvezde Koželj z dne 17. avgusta 1993 konservatorjem etnologom, v katerem je posredovala podatke o treh obrtnikih z referencami dela na kulturni dediščini in prošnjo Vita Hazlerja, naj delovna skupina etnologov konservatorjev pripravi *»almanah obrtnikov z najosnovnejšimi podatki in njihovimi referencami«*. Dopis hrani ZVKDS, OE Novo mesto, v arhivu dokumentacije, povezane z delovanjem delovne skupine etnologov konservatorjev.

38 Ministrstvu za kulturo po več kot dvajsetih letih še ni uspelo vzpostaviti preglednega in javno dostopnega seznama strokovno usposobljenih izvajalcev za opravljanje specializiranih del varstva, kot to določa 105. člen Zakona o varstvu kulturne dediščine (2008).

39 Poklicne standarde za tradicionalne poklice kamnosek, krovec-klepar, mizar, pečar, slikopleskar-črkoslikar, tesar in zidar je leta 2015 pripravila delovna skupina za revizijo kataloga standardov strokovnih znanj in spretnosti v sestavi Jožef Drešar (GNOM, d. o. o.), Maja Štembal Capuder (Srednja gradbena, geodetska in ekonomska šola Ljubljana), Dušan Štepec (ZVKDS), Mateja Kavčič (ZVKDS), Mateja Hafner Dolenc (Združenje zgodovinskih mest Slovenije), Živa Deu (Fakulteta za arhitekturo) in koordinatorica Barbara Kunčič Krapež (Center RS za poklicno izobraževanje). Poklicni standard za poklic skodlar je leta 2015 pripravila delovna skupina za pripravo strokovnega standarda v sestavi Tomaž Bergant (Triglavski narodni park), Zdenko Cesar (Zavod za gozdove), Dušan Štepec (ZVKDS), Saša Roškar (ZVKDS), Janez Krnc (Zavod Marianum), Petra Krnič (BB, izobraževanje in usposabljanje, d. o. o.) in koordinatorka Barbara Kunčič Krapež (Center RS za poklicno izobraževanje).

40 Etnološko konservatorstvo se je v Sloveniji začelo razvijati po letu 1982, ko so se takratni etnologi konservatorji povezali v Delovno skupino etnologov konservatorjev pri Slovenskem etnološkem društvu. Bolj intenzivno pa v drugi polovici osemdesetih let 20. stoletja, ko je projektna skupina pripravila vsebine za študijski predmet Etnološko konservatorstvo, ki ga je na Oddelku za etnologijo začel predavati Vito Hazler v šolskem letu 1989/90 (Delak Koželj 2009: 48–49; Hazler 2004a).

41 Etnologi konservatorji so prejemniki Steletovih priznanj, ki jih za vrhunske dosežke na področju konservatorstva podeljuje Slovensko konservatorsko društvo. Ledino sta orala Vito Hazler, prejemnik Steletovega priznanja za leto 1994, in Vladimir Knific, prejemnik Steletovega priznanja za leto 1999. V zadnjem obdobju so bili med prejemniki Steletovega priznanja še Delovna skupina etnologov konservatorjev pri Zavodu za varstvo kulturne dediščine Slovenije (2013), Dušan Štepec (2014), Andrejka Ščukovt (2015) in Eda Belingar (2018). Delo etnologov konservatorjev pa ni ostalo neopaženo niti v mednarodnem prostoru. Obnovljena Kavčnikova domačija je bila leta 1992 nominirana za nagrado evropski muzej leta, za to nagrado sta kandidirala še muzej na prostem v Rogatcu leta 1997 in Sečoveljske soline leta 2004. Slednje so za obnovo kulturne dediščine leta 2003 prejele mednarodno nagrado Europa Nostra. Pri vseh treh projektih so imeli etnologi konservatorji pomembno vlogo. Posebno zahvalo Ministrstva za kulturo Republike Hrvaške je leta 2010 prejel Dušan Strgar za delo pri organizaciji mednarodnega simpozija etnologov konservatorjev Slovenije in Hrvaške. Zadnji uspeh konservatorjev etnologov v mednarodnem prostoru pa je povezan z delom konservatork Andrejke Ščukovt, ki je imela zasluge za podelitev priznanja Constructive Alps leta 2015 za obnovo pastirskega stanu na planini Laška seč na Tolminskem, in Ede Belingar pri uvrstitvi znanja suhogradnje iz kamna na Unescov seznam nesnovne dediščine človeštva leta 2018.

Teme, ki so bile obravnavane na simpozijih, so vključevale interdisciplinarni pristop, ki je za delo v konservatorstvu ter za celovito in celostno obravnavo nepremične kulturne dediščine ključnega pomena. S tega vidika je bil simpozij vseskozi odprt ne samo za etnologe konservatorjev, temveč tudi za konservatorje drugih matičnih strok in za strokovnjake iz drugih institucij, ki se tako ali drugače srečujejo s problematiko varovanja in ohranjanja kulturne dediščine. Ravno možnost, da se na določeno temo srečujejo različni strokovnjaki, ki lahko drug drugemu z različnih strokovnih vidikov predstavijo problematiko določene teme, se je izkazala za pravo programsko usmeritev simpozija, kar so izpostavljali udeleženci na zaključkih simpozijev. Zelo pomembna vloga simpozija etnologov konservatorjev je tudi v tem, da oživlja nekdanje tesnejše povezovanje in izmenjave izkušenj med konservatorji v prostoru, v katerem so bila tovrstna povezovanja prekinjena z vojnami v prvi polovici devetdesetih letih 20. stoletja. Gre za zanimiv, raznolik in impulziven prostor, v katerem so zaradi prisotnosti različnih narodov, narodnih manjšin, etničnih skupin, veroizpovedi, različnih kultur in načinov življenja procesi nastajanja dediščine zelo intenzivni. Prav tako so raznoliki tudi pogledi na dediščino ljudi, ki živijo v tem prostoru. Je pa to tudi prostor, v katerem se srečujeta zahodnoevropska in bližnjevzhodna konservatorska tradicija.

Zaradi omenjenega si bo organizacijski odbor s simpoziji še naprej prizadeval uresničevati idejo, da ta prostor ponuja svoj pogled na varovanje in ohranjanje kulturne dediščine ter s tem prispeva k razvoju konservatorstva.

Posebna vrednost simpozijev konservatorjev etnologov so tudi številni zaključki, ki so bili sprejeti z namenom, da služijo kot kažipot načrtovalcem razvoja varstva in ohranjanja kulturne dediščine, da z določenimi strateškimi in sistemskimi ukrepi izboljšajo stanje na področju varovanja in ohranjanja kulturne dediščine, ki je zaradi hitrega gospodarskega razvoja in globalizacije ogrožena kot še nikoli doslej. Obenem pa so zaključki tudi pripomoček vsakokratnemu vodstvu spomeniškovarstvene službe za izboljšanje strokovnega dela v konservatorstvu.

Povzetek

V prispevku so ob dvajsetletnici delovanja prvič celovito kronološko predstavljeni razvoj mednarodnega simpozija etnologov konservatorjev Slovenije in Hrvaške ter njegova vloga, pomen, rezultati in prispevki k razvoju konservatorske stroke. V njem so podrobno predstavljeni ideja, izhodišče, koncept in vsebina strokovnega konservatorskega srečanja, ki je iz bilateralnega sodelovanja med slovenskimi in hrvaškimi etnologi konservatorji preraslo v osrednje strokovno konservatorsko srečanje v jugovzhodnem delu Evrope, namenjeno ne le etnologom konservatorjem, temveč tudi konservatorjem iz drugih matičnih strok ter vsem drugim strokovnjakom in izvajalcem na področju varovanja in ohranjanja kulturne dediščine. V prispevku so predstavljeni vsebinski poudarki posameznih simpozijev, na katerih je doslej sodelovalo več kot 80 različnih strokovnjakov s področja varstva in ohranjanja kulturne dediščine iz petih držav. Razpravljali so o aktualnih konservatorskih vprašanjih, problematiki konservatorske teorije in prakse, metodologiji strokovnega dela, prispevkih etnologije v konservatorstvu, konservatorski doktrini, vlogi in pomenu konservatorskega dela v družbi. V zadnjem delu prispevka so predstavljeni najpomembnejši prispevki mednarodnega simpozija etnologov konservatorjev k izboljšanju strategije varstva kulturne dediščine in organizacije spomeniškovarstvene službe ter k metodologiji strokovnega dela v konservatorstvu. Izpostavljeni so prispevki simpozija, ki zadevajo splošno in konkretno problematiko varovanja in ohranjanja nepremične kulturne dediščine, in sicer celovitega varstva kulturne dediščine, zaustavitev propadanja nepremične kulturne dediščine, problematiko povezovanja in sodelovanja med ministrstvi, problematiko finančnih sredstev za obnovo dediščine, kadrovske politike, možnosti študija konservatorstva, rabe kulturne dediščine z načeli stroke, zagotavljanja celovitega in celostnega varstva nepremične kulturne dediščine, zagotavljanja enotnega strokovnega dela v konservatorstvu, enotnega sistema vrednotenja dediščine, problematiko avtentičnosti pri obnovi lesene stavbne dediščine, raziskovanja in publiciranja raziskav, interpretacije dediščine, vzpostavitve mreže terenskih konservatorskih sodelavcev in problematiko upravljanja dediščine.

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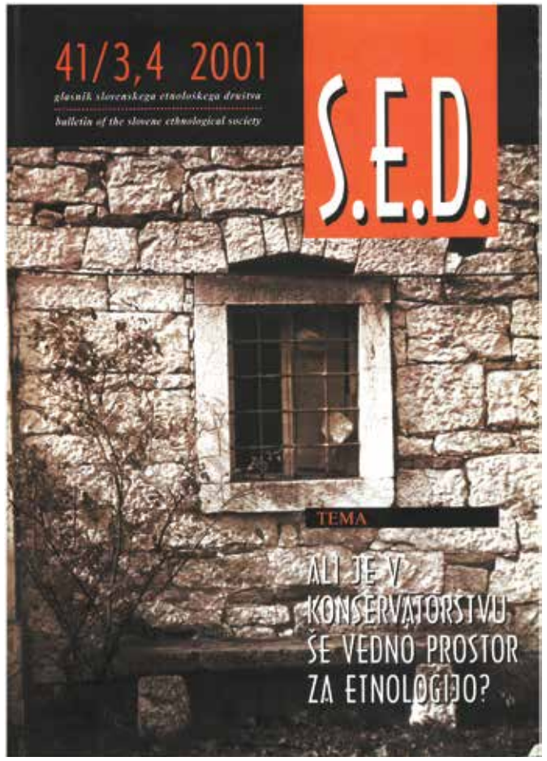
1. Srečanje etnologov konservatorjev v Ozlju, maj 1999 (foto: D. Štepec, ZVKDS, OE Novo mesto)
1. Meeting of ethnologist conservators in Ozalj (photo: ZVKDS Archive, OE NM)

2. Srečanje etnologov konservatorjev v Rogatcu, april 1999 (foto: D. Štepec, ZVKDS, OE Novo mesto)
2. Meeting of ethnologist conservators in Rogatec (photo: ZVKDS Archive, OE NM)



3. Naslovnica Glasnika Slovenskega etnološkega društva, v katerem so objavljeni referati prvega simpozija v Metliki.
3. Cover of the Herald of the Slovene Ethnological Society in which papers from the first symposium in Metlika were published

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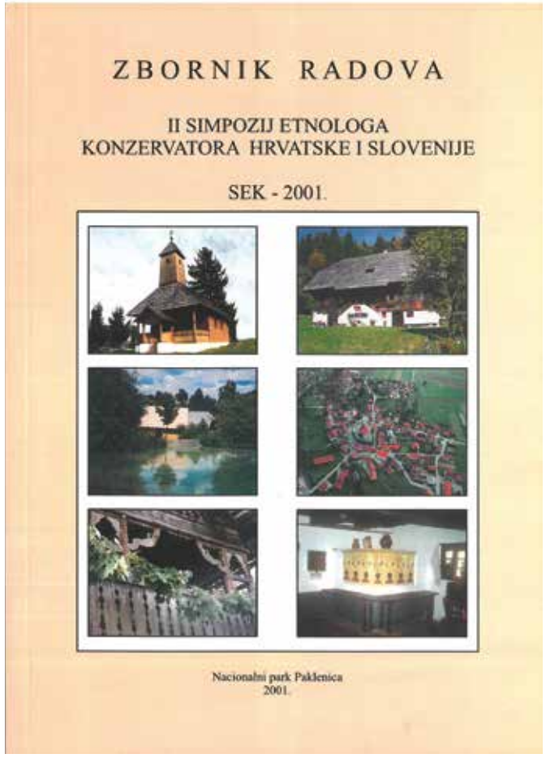
4. Participants of the first symposium in Metlika on an excursion posing in front of the Klepec Mill in Pusti Gradec (photo: ZVKDS Archive, OE NM)



5. Naslovnica zbornika drugega simpozija, ki je bil leta 2001 organiziran v Starem gradu pri Paklenici na Hrvaškem.
5. Cover of the proceedings of the second Symposium

7. Naslovnica zbornika četrtega simpozija, ki je bil leta 2010 organiziran na Hvaru.
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10. The Institute for the Protection of Cultural Heritage of Slovenia thanking Ana Mlinar for her work in the organising committee of the Symposium of Ethnologist Conservators in 2013 in the Trenta valley (photo: ZVKDS Archive, OE NM)

12. Člani organizacijskega odbora šestega simpozija, od leve proti desni stojijo Žarko Španiček, Ana Mlinar, Željka Perković, spredaj od leve proti desni čepijo še Krešimir Mijakovac, Dušan Štepec in Dušan Strgar (foto: arhiv ZVKDS, OE Novo mesto)
12. Members of the 6th Symposium organising committee; from left to right standing: Žarko Španiček, Ana Mlinar and Željka Perković; crouching in the front from left to right: Krešimir Mijakovac, Dušan Štepec and Dušan Strgar (photo: ZVKDS Archive, OE NM).

11. Naslovnica zbornika šestega simpozija, ki je bil organiziran leta 2015 v Požegi in v Slavonskem Brodu.
11. Cover of the proceedings of the sixth Symposium

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15. Group photograph of symposium participants in front of the Makedonium monument during an excursion to Kruševo (photo: ZVKDS Archive, OE NM)

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The role and significance of the international Symposium of Ethnologist Conservators and its contribution to the development of conservation theory and practice

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Abstract

This paper marking the 20th anniversary of the international Symposium of Ethnologist Conservators presents how it has developed, its role, significance and results, and its contribution to developing the conservation profession. During this period eight symposia were organised, four in Slovenia, three in Croatia and one in North Macedonia. Over 80 different experts in safeguarding and preserving cultural heritage from five countries participated in them. They discussed current conservation matters, questions of conservation theory and practice, the methodology of professional work, contributions of ethnology to conservation, conservation doctrine, and the role and importance of conservation work in society.

Introduction

The international Symposium of Ethnologist Conservators is an interdisciplinary professional meeting of conservators and other experts, researchers and professionals in the field of safeguarding and preserving cultural heritage. These are professional meetings with the longest running history in the territory of the former Yugoslavia after its disintegration in the early 1990s, as they have been held continuously since 2000. The idea of cooperation between Slovenian and Croatian ethnologist conservators very quickly outgrew the initial bilateral framework, as staff from Serbia, North Macedonia and Bosnia and Herzegovina very quickly responded to the invitation from the organisers to participate in the symposium. In the twenty years that have passed since the first symposium was organised in 2000 in Metlika, eight symposia have been organised at which more than 80 different experts from five countries have presented more than 150 papers. Twenty years of continuity, a large number of participants from five countries and the sheer diversity of subjects they have discussed, make the Symposium of Ethnologist Conservators one of the most important meetings of conservators at the point where Central and Southeast Europe meet. Further on in this paper we will present the twenty-year history of the symposium, its beginnings, development and content, and key contributions to the development of conservation.

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From the idea to organisation of the first symposium

In the 1970s and 1980s there was lively cooperation across disciplines, including ethnology, at conferences in the former Yugoslavia,[1] however, there was no specific conference at which ethnologist conservators could meet and which would be intended for the problem of preserving what is called ethnological heritage or ethnological conservation.[2]
After the breakup of Yugoslavia at the beginning of the 1990s, different professional groups again began connecting with each other, some sooner, others a little later. The first to succeed were the ethnologist conservators. The wars in the Balkans in the first half of the 1990s interrupted almost all former contacts with fellow ethnologist conservators in the former republics. It was not until 1997, at the international conference in Kumrovec on open-air museums, that ethnologist conservators first came up with the idea that they could re-establish contact (Strgar 2001: 58).
A crucial turning point occurred in autumn 1998, when Croatian colleague Ana Mlinar from the conservation department in Zagreb was looking for a roof thatcher, and turned to the Slovenian Directorate for Cultural Heritage and the Institute for the Protection of Natural and Cultural Heritage in Novo Mesto for information and advice.[3] She came in touch with colleague Dušan Strgar from the Novo Mesto Institute, who already had experience with thatched roofs in the Pleterje open-air museum, where he collaborated in the 1990s with thatcher France Barbič from Hrastek in thatching roofs on the Kegljevič and Banič houses, and on the toplar hayrack of Ločna near Novo Mesto and the pigsties of Javorovica (Strgar 1998). Mlinar and Strgar met the same year in Zagreb, at the regional conservation department where Mlinar worked (Strgar 2001: 28; Mlinar 2003: 12).
At this meeting they concluded their discussion about masters of traditional crafts and problems in conservation with an agreement that they would try to organise a small meeting of[4] Slovenian and Croatian ethnologist conservators, which would then encourage wider and more long-term professional cooperation of conservator ethnologists from Slovenia and Croatia. Their idea was presented and adopted at the working meeting of Slovenian ethnologist conservators and museum staff on 3 February 1999 in Ljubljana, which was convened by Zvezda Koželj from the Slovenian Directorate for Cultural Heritage. At this meeting it was agreed that a specialist consultation of ethnologist conservators from Slovenia and Croatia should be organised, at which participants would present the successful renovation of immovable cultural heritage in both countries and would discuss further collaboration (Strgar 2001: 58).
The initiative by Ana Mlinar and Dušan Strgar was accepted by both sides and on 20 May 1999 in Ozalj, Croatia, a colloquium entitled *Expert colloquium on the conservation and renovation of traditional buildings* was held (Strgar 2001: 58; Mlinar 2003:12). The participants agreed that further similar meetings should be held, and that experts from other institutions who also work in the field of safeguarding and preserving cultural heritage should also be invited to collaborate and contribute their knowledge to developing conservation techniques. It was the task of Ana Mlinar and Dušan Strgar to prepare a draft long-term programme of collaboration between Slovenian and Croatian ethnologist conservators by the next consultation.
Their proposal for a long-term programme of collaboration was supplemented and presented in an expanded working group entitled Initiative committee for the organisation of the first Symposium of Ethnologist Conservators of Slovenia and Croatia (alongside Mlinar and Strgar it consisted also of Nada Duić – Kowalsky, Manja Horvat and Zoran Živković from the Croatian Institute for Cultural Heritage, Ksenija Marković from the conservation department in Zagreb, Zvezda Delak – Koželj from the Slovenian Institute for Cultural Heritage and Dušan Štepec from the Institute for the Protection of Natural and Cultural Heritage, Novo Mesto), at the next consultation which took place on 14 April 2000 at the open-air museum in Rogatec (Strgar 2001: 58; Mlinar 2003: 12–13).
The consultation in Rogatec, where the theme was the problem of protecting ethnological immovable heritage in open-air museums, was attended by representatives of the Slovenian Institute for Cultural Heritage and the Croatian Institute for the Protection of Cultural Heritage, alongside conservators from both countries. The participants agreed that symposia should be organised alternately by ethnologist

1 There were many professional meetings in the form of consultations and conferences. Two of the most important events were the 12th international congress of anthropological and ethnological sciences in Zagreb in 1988 and the consultation about the renovation of buildings in Maribor in 1989. Very intense cooperation between Slovenian and Croatian ethnologists also took place in the consultations known as Ethnological Parallels, in which individual colleague ethnologist conservators presented their papers.

2 We can only speak of ethnological conservation since the 1991/92 academic year, when it was included as a subject in the study programme of the Department of Ethnology and Cultural Anthropology, Faculty of Arts, University of Ljubljana. Lectures in Ethnological Conservation were led from the beginning in the department by Vito Hazler who came there with more than ten years experience in conservation from the former Celje Regional Institute for the Conservation of Natural and Cultural Heritage. Ethnological conservation was also the subject of his doctorate entitled *Demolish or Renovate? The Historical Development, Analysis and the Model of Ethnological Conservation in Slovenia.*

3 The Institute for the Protection of Natural and Cultural Heritage, Novo Mesto, which was still a stand-alone entity at the time. Today this is the Novo Mesto Regional Unit, which since 2008 has been a constituent part of the single Institute for the Protection of Cultural Heritage of Slovenia, with headquarters in Ljubljana.

4 The idea was that this consultation would become the basis for further and wider expert collaboration between conservators from Slovenia and Croatia.

conservators from both countries, and they also approved a long-term programme of collaboration.[5] They adopted a proposal for the long-term programme of collaboration and the conclusion that it was necessary to develop cooperation at different levels between experts and institutions working in the field of safeguarding immovable cultural heritage. It was also decided that the organising committee, consisting of Ana Mlinar and Ksenija Marković from the conservation department in Zagreb, Dušan Strgar and Dušan Štepec from the Institute for the Protection of Natural and Cultural Heritage, Novo Mesto and Zvezda Koželj from the Slovenian Institute for the Protection of Cultural Heritage should in the same year organise the first Symposium of Ethnologist Conservators of Slovenia and Croatia in Slovenia, in Metlika. The committee fulfilled its task and the symposium took place in Bela Krajina Museum in Metlika between 9 and 10 November 2000 (Strgar 2000: 580; Strgar 2001: 28; Mlinar 2003: 13).

The long-term programme of symposia of ethnologist conservators from Slovenia and Croatia

The basic framework for the operation of the international consultation of ethnologist conservators is the long-term programme of collaboration of ethnologist conservators both with other conservators as well as with experts from related institutions, which was adopted in 2000 at the consultation in Rogatec. The programme defined the basic thematic sets with questions from the field of safeguarding and preserving natural and cultural heritage.
The programme encompasses six thematic sets which are intended for dealing with conservation issues from different angles:

1. **Issues connected with the state and protection of immovable ethnological heritage:**
- safeguarding immovable ethnological heritage (definitions and methodologies, reasons for the defined state, measures necessary to improve the state of the profession, legislation and the state of heritage *in situ*, proposals for improvements),
- conservation doctrine (the history of conservation, methodology, conservation policies),
- the role of ethnologist conservators in conservation activities (theory and practice).

2. **Interdisciplinary and integral approach (training and study programmes for conservators):**
- conservation study programme,
- implementation of the interdisciplinary and integral approach also in research and practice in the field,
- conservation practice and experience,
- specialisations,
- the need for interdisciplinary work.

3. **Ethnology and the ethnologist, and a country's cultural identity:**
- refinement of culture in everyday life, inclusion in the learning process and education of young people in extra-curricular activities etc,
- the role of the ethnologist in safeguarding monuments, in the country's development, in creating a more humane society and living environment,
- cultural heritage as part of the presentation of national culture (how present it is and in which forms it appears most frequently, proposals for new aspects),
- interpretation of heritage.

4. **Renovation of individual sections and of entire units:**
- documentation, approach methods and models,
- issues connected with the renovation of heritage (material, craftsmen, conservators, training and international exchange of material and knowledge),
- financial means, sponsors, tax relief for owners and contractors,
- intended use or function, arrangement of premises, adaptations etc.,
- experiences of training centres,
- references for master craftsmen.

5. **International projects and foreign experience:**
- Kolpa Nature Park – protection from both sides of the Kolpa border river, Goričko – Prekmurje, Gorjanci – Žumberak, Kozjansko Regional Park – Hrvatsko Zagorje, Zagorje, Istria and so on,
- scientific projects (institutes, faculties, museums etc.),
- ECOVAST, ALPS-ADRIATIC, ICOMOS, PHARE, INTERREG, Norwegian Financial Mechanism, European funds etc.,
- experience with consultations and professional training abroad,
- results based on the experience of foreign standards of safeguarding rural heritage (CRPOV, Po poteh dediščine Dolenjske in Bele krajine, ICOM, AEOM etc.),
- exchanges between experts.

Global achievements in the conservation of natural and cultural heritage in natural parks, in protected areas and in settlements:
- forms of protection (legislation, expert bases for spatial plans),
- financial and educational aspects of conservation (interpretation, presentation, popularisation of immovable ethnological heritage),
- problems connected with new constructions in protected areas (documentation, materials, starting points, the role of the ethnologist in preparing a programme for the management of a protected area (Lonjsko Polje Nature Park, Plitvice Lakes National Park, Kozjansko Regional Park, Triglav National Park, Paklenica National Park, Škocjan Caves Regional Park, Pelister National Park, Kopaonik National Park, Protected Landscape of Bijambare etc.)),
- challenges and experience in managing cultural heritage.

The long-term programme of collaboration initially focused on issues connected with conservation in Slovenia and Croatia. That is why at the outset the name of the Symposium mentioned ethnologist conservators from Slovenia and Croatia
As more and more conservators from other parts of the former Yugoslavia attended the Symposium, the permanent members of the organising committee began thinking (after 2015) about a deliberate expansion of the Symposium to include other states of the former Yugoslavia, with the wish that on a long-term basis the Symposium would become the main international professional and scientific conservation meeting in Southeast Europe.[6]
The organising committee thereby set about preparing a proposal for supplementing the long-term plan for collaboration to also include the conclusions of the 8th Symposium which was organised in Bitola, North Macedonia, in October 2019.[7] There are several reasons for the supplementing of the plan. On the one hand there are the formal and organisational aspects connected with the gradual expansion of the Symposium from Slovenia and Croatia to include other countries in Southeast Europe. And there are also reasons connected with content and the development of conservation theory and heritage protection legislation, which is the result of democratisation and a participative approach to protecting and preserving heritage.
It must be noted that after 2000, when we began organising the symposia, UNESCO adopted a series of new conventions, declarations and recommendations including the Universal Declaration on Cultural Diversity (2001), the Convention for the Safeguarding of the Intangible Cultural Heritage (2003), the Yamato Declaration on Integrated Approaches for Safeguarding Tangible and Intangible Cultural Heritage (2004) and the Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005). In this period new recommendations were adopted also by the International Council on Monuments and Sites (ICOMOS), including the Declaration on the Preservation of the Spirit of Place (2008), Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes (2011), the Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas (2011) and the Namur Declaration on Guidelines for a European Heritage Strategy for the 21st Century (2015).
Moreover, in all this time during which the symposia have been held, we have faced some new professional challenges which have already been highlighted by Zvezda Koželj in the article entitled The Ethnologist and the Integral Approach to Cultural Heritage Protection, from 2013. In it she emphasised the following key professional challenges:
"– *safeguarding and preserving the entire cultural environment (not just cultural monuments and cultural heritage),*
– *the integral preservation of cultural heritage and cultural diversity (while protecting the environment and respecting human rights, two out of four anti-globalisation mechanisms),*
– *research, interpretation, transmission of meanings of cultural heritage (not just classical but also current) in the past and in the present,*
– *communication, mediation, marketing, administration, networking of heritage potential (in collaboration with owners, administrators, local community representatives, state bodies, NGOs etc.) and*
– *sustainable planning of coordinated regional development and spatial planning."* (Koželj 2013: 210–211).
In addition to this she listed some things that she believes should be paid more attention to in conservation:
"– *consistent inclusion of the local population/owners in recognising, understanding, maintaining and decision-making in connection with heritage,*
– *knowing the heritage of others and of those different from us, which is an important element of interpersonal understanding and respect,*
– *the integrated treatment of cultural heritage with other areas (including what are called living) cultures in a chosen area,*
– *the integrated treatment of natural values and cultural heritage,*
– *the integrated treatment of tangible and intangible heritage."* (Koželj 2013: 211)
The organising committee will try to include the above challenges together with the conclusions and findings of individual symposia in the proposed supplement to the long-term plan.[8]

5 The long-term programme of cooperation between Slovenian and Croatian conservators with ethnologists and all experts in the field of conservation was published in the Herald of the Slovene Ethnological Society 41/3–4 in 2001 and in the Zbornik radova II. simpozija etnologa konzervatora Hrvatske i Slovenije, which was published in 2003 in Zagreb.

6 Deliberation about the expansion of the Symposium kicked off at the 6th Symposium of Ethnologist Conservators of Slovenia and Croatia, which was organised in 2015 in Požega and Slavonski Brod. The idea was finally accepted in 2017 at the 7th Symposium of Ethnologist Conservators of Slovenia and Croatia in Krško. The decision was also made then that the conservators from North Macedonia should also help organise the 8th symposium. At the same time the organising committee first voiced the idea at this Symposium that the Symposium should in the long-term become the main meeting of conservators in Southeast Europe.

7 The conclusions of the 8th Symposium of Ethnologist Conservators, which took place between 2 and 4 October 2019 in Bitola, are listed in the report prepared by Dušan Štepec and Dušan Strgar, and will be published in No. 61 of the Herald of the Slovene Ethnological Society.

8 The proposal for the supplement to the long-term programme has

Step by step from the first to the eighth symposium

The first Symposium of Ethnologist Conservators from Slovenia and Croatia took place in Bela Krajina Museum in Metlika between 9 and 10 November 2000.[9] Eleven papers were presented at the Symposium, divided into three thematic categories: Issues connected with the state and protection of immovable ethnological heritage, Projects in border regions and International projects which deal with immovable ethnological heritage (Strgar 2001).
The main emphasis of the Symposium was to portray the work of ethnologist conservators in safeguarding monuments, to compare the safeguarding of natural and cultural heritage in Slovenia and Croatia with concrete examples of safeguarding heritage in the Kolpa Nature Park and the Lonjsko Polje Nature Park, and present international development projects which include heritage in tourism products. The following two projects were highlighted in particular: On the heritage trails of Dolenjska and Bela Krajina, and Heritage trails – from both sides of the River Kolpa.[10]
Several conclusions were reached at the consultation in Metlika, including the following:

- integral protection is the most appropriate approach to safeguarding natural and cultural heritage in large protected areas such as nature parks,
- when renovating ethnological immovable heritage, an interdisciplinary approach should be considered in all phases of conservation work,
- more professional attention should be devoted to documenting heritage in archives as it is constantly decaying and disappearing (Strgar 2001; Mlinar 2003: 16).

The second Symposium of Slovenian and Croatian ethnologist conservators entitled Immovable Cultural Heritage as a Resource for the State's Economic Development, took place from 6 to 8 June 2001 in Starigrad Paklenica, Croatia.[11] Around 50 experts participated and 26 papers divided into four thematic categories were presented: The study of ethnology and conservation, International projects and domestic experience, the Revitalisation of traditional qualities and Approaches and results of safeguarding immovable cultural heritage in practice.[12] The conclusions reached at the consultation included the essential finding that despite its diversity and richness, ethnological immovable cultural heritage was not sufficiently on offer as a tourism product due to an inadequate system of financing, which means it is not maintained and therefore falls into disrepair (Mlinar 2003: 19).

Thethird Symposium of Slovenian and Croatian Ethnologist Conservators took place between 12 and 14 June 2002 in the Posavje Museum in Brežice.[13] The Symposium programme was divided into two sections: The Work of the Conservator and Curator and their Collaboration, and Wooden Architectural Heritage – Study, Interventions, Methods and Wood Preservation. The first section dealt with theoretical questions and problems connected with the work of the conservator and curator in practice, while the second sought to highlight the problem of preserving and protecting wooden architectural heritage from different points of view. 35 experts from different professional institutions participated in the consultation at which 22 papers were presented, and both topics were covered in an interdisciplinary way from different viewpoints. A series of conclusions connected with conservation procedures for preserving wooden architectural heritage were reached.[14] The lectures were published in a collection edited by Dušan Strgar, and this came out in electronic form.[15]

The Fourth Symposium of Slovenian and Croatian Ethnologist Conservators entitled Safeguarding immovable cultural heritage took place from 24 to 27 May 2010 in Stari Grad on the island of Hvar.[16] 19 papers in four thematic categories were presented at the consultation: UNESCO and Traditional Cultural Heritage, Ways of Safeguarding Traditional Architectural Heritage, Space and Immovable Cultural Heritage as a Resource for the Latest Forms of Management and the Globalisation Process and Identity of Space. Stari Grad on the island of Hvar was deliberately chosen as the location for the Symposium, as the Stari Grad Plain (Starogradsko polje) became a UNESCO World Heritage Site in 2008. This plain, with its preserved ancient Greek land parcellation, provided the motive and opportunity for organising a symposium on Hvar, on the subject of problems with safeguarding, preserving and managing UNESCO's World Heritage in Croatia and Slovenia (Mlinar and Čiča 2015).
The papers from the Hvar Symposium were published in 2015 in a collection edited by Sanja Buble and Zoran Čiča. It included conclusions dealing with nine different matters:

- the state of architectural heritage,
- the legal, programme-related and institutional framework of operation,
- financing,
- training,
- human resources policy,
- expertise, practice and operations,
- public relations, promotion and education,
- ways of safeguarding and presenting traditional cultural heritage and
- the continued collaboration of Slovenian and Croatian conservators (Buble and Čiča 2015: 229–249).

The fifth Symposium of Slovenian and Croatian Ethnologist Conservators was held from 9 to 11 October 2013 at Log in the Trenta Valley in Triglav National Park.[17] 29 papers divided into three thematic categories were presented at the symposium: The Ethnologist and Cultural Anthropologist Safeguarding Monuments – their Place, Role and Contribution to Preserving Heritage and Developing Monument Preservation, Safeguarding Cultural Heritage and its Use, and the Co-operation of Conservators in Joint Border Region Projects of Heritage Conservation. The papers were published in 2015 in a collection edited by Dušan Strgar.[18] The main findings out of the ten conclusions reached at the symposium were:

- too few ethnologists are employed in the monument protection service considering the large proportion of ethnological immovable cultural heritage out of all the listed heritage,
- ethnological immovable cultural heritage is extremely under threat, deteriorating and disappearing so it must constantly be researched, documented, analysed and the results published,
- the existing models of protecting and preserving cultural heritage that have proved ineffective for protecting ethnological immovable cultural heritage, must be supplemented with additional forms of active protection, e.g. by means of open-air museums and "ecomuseums",
- a system of professional training for conservators must be established and a more significant role and significance should be given to mentorship,
- professional standards for work in conservation must be drawn up (Strgar 2015: 255–266; Strgar, Ščukovt, Štepec, Mlinar, Križanić and Čiča 2013).

The sixth Symposium of Slovenian and Croatian Ethnologist Conservators, entitled Ethnological immovable cultural heritage between discovery and oblivion, took place from 28 to 30 October 2015 in Požega, Croatia.[19] Ethnologist conservators from Serbia and North Macedonia participated in this symposium for the first time. 21 papers divided into four thematic categories were presented: The Theoretical and Social Context of Conservation Work, Recognising, Evaluating and Documenting Heritage – a Basis for Renovation and Preservation, Legislation, Social Changes and Memorial Heritage and the Renovation and Preservation of Traditional Heritage – from the Conservator's Basis to the Presentation. The papers were published in 2018 in a collection edited by Žarko Španiček.[20]
These are some of the main findings of the sixth Symposium:

- it is necessary to redefine and complete the Strategy for Safeguarding Cultural Heritage,
- evaluation criteria must be standardised,
- the system of judicial protection must be supplemented in such a way that it takes into consideration the characteristics of different types of heritage,
- a unified protection methodology must be set up in protected areas of natural and cultural heritage,
- it is essential that conservators participate in planning heritage-based tourism products in cultural tourism due to the danger of negative (mis)use of heritage (Španiček 2018: 300–305; Španiček, Perkovič, Mlinar, Mijakovac, Štepec and Strgar 2015).

The seventh Symposium of Slovenian and Croatian Ethnologist Conservators, entitled Managing Cultural Heritage:

not been finalised yet and is therefore not published in this paper. The aim of the organising committee is to prepare supplements by the next symposium, which will be held in 2021 in Serbia.

9 The first Symposium was prepared by the organising committee consisting of Ksenija Marković, Ana Mlinar, Dušan Strgar and Dušan Štepec.

10 The papers from the first symposium were published together with the reports and conclusions in the Herald of the Slovene Ethnological Society in 2001, as there were not enough funds available to pay for publication in the form of proceedings at the time.

11 The second symposium was prepared by the organising committee consisting of Ksenija Marković, Ana Mlinar, Dušan Strgar and Dušan Štepec.

12 The papers were published as a collection entitled Zbornik radova, II. simpozij etnologa konzervatora Hrvatske i Slovenije, Zaštita i očuvanje tradicijske kulturne baštine, which was published in 2003, and edited by Ana Mlinar. 17 conclusions were also featured in the publication (Mlinar 2003: 313–324). The report with conclusions from the second symposium was also published in Glasnik Slovenskega etnološkega društva (Herald of the Slovene Ethnological Society) in 2002 (Strgar, Mlinar, Marković and Štepec 2002).

13 Prepared by the organising committee consisting of Ana Mlinar, Ksenija Petrić, Dušan Štepec and Dušan Strgar.

14 The report with 16 conclusions was published in the Herald of the Slovene Ethnological Society in 2002 (Strgar, Mlinar, Petrić and Štepec 2002).

15 Dušan Strgar (ed.) (2002): *Proceedings of the Third Symposium of Ethnologist Conservators from Slovenia and Croatia – SEK 2002.* Brežice: Institute for the Protection of Cultural Heritage of Slovenia.

16 Some novelties were introduced in the organisation of the fourth Symposium: four members of the permanent organising committee were joined by the Symposium hosts. The organising committee of the fourth Symposium therefore consisted of the four permanent members Dušan Strgar, Dušan Štepec, Ana Mlinar and Zoran Čiča. The latter replaced Ksenija Marković, who died in 2007 (Petrinec 2007). The additional members of the organising committee from the host location were Sanja Buble and Ivana Radovani from the Split regional conservation department.

17 The fifth Symposium of Ethnologist Conservators was prepared by the organising committee consisting of Dušan Strgar, Zoran Čiča, Dušan Štepec, Ana Mlinar, Andrejka Ščukovt and Branka Križanić.

18 Dušan Strgar (ed.) (2015): *The Symposium of Ethnologist Conservators of Slovenia and Croatia: Safeguarding Immovable Cultural Heritage: proceedings from the Fifth Symposium of Ethnologist Conservators of Slovenia and Croatia. Triglav National Park, INFO Centre Dom Trenta, Log v Trenti, 9. 10.–11. 10. 2013.* Novo Mesto: Institute for the Protection of Cultural Heritage of Slovenia, Novo Mesto Regional Unit.

19 The sixth Symposium of Ethnologist Conservators was prepared by the organising committee consisting of Žarko Španiček from the conservation department in Požega, Željko Perković and Krešimir Mijakovac, both from the conservation department in Slavonski Brod, Ana Mlinar and Zoran Čiča, both from the conservation department in Zagreb, Dušan Štepec and Dušan Strgar, both from the Institute for the Protection of Cultural Heritage of Slovenia, Novo Mesto Regional Unit.

20 Žarko Španiček (ed.) (2018): *Immovable cultural heritage between discovery and oblivion: proceedings of the Sixth Symposium of Ethnologist Conservators from Slovenia and Croatia, Slavonski Brod, 2015.* Zagreb: Croatian Ethnological Society.

from Evaluation to Interpretation, took place from 11 to 13 October 2017 in Krško.[21] 20 papers divided into two thematic categories were presented at the Symposium: Evaluating Cultural Heritage and Interpreting and Managing Cultural Heritage. The papers were published in 2018 in a collection edited by Dušan Strgar.[22] The main findings from the Symposium in Krško were:

- in the monument protection service it is necessary to establish a standardised system for evaluating cultural heritage which must take into consideration the multi-disciplinarity of conservation,
- the basis for forming a standardised evaluation system should be the value system that is valid for evaluating and managing world cultural heritage,
- the objectivity of evaluation should be ensured with descriptive and numerical assessment,
- local and heritage communities should be involved in planning management of cultural heritage; their tasks and cooperation in management should be determined in an administrative plan which is the core and compulsory document for planning the management of heritage,
- topographic surveys of individual types of heritage in the form of catalogues and topographies are essential accessories for high-quality assessment of cultural heritage,
- motivating and informing heritage owners and the interested public is an important conservation task, so it is essential that the line ministry provides additional financial, professional and staff support for the educational and promotional activity of the monument protection service,
- the Ministry of Culture should use public tenders to encourage inter-institutional cooperation and collabo-ration of the monument protection service with local and heritage communities (Strgar 2018: 277–288; Štepec 2018).

The eighth Symposium of Ethnologist Conservators, entitled Managing Cultural Heritage: from Validation to Interpretation, took place from 2 to 4 October 2019 in Bitola, North Macedonia.[23] Representatives of five countries were present: North Macedonia, Slovenia, Croatia, Serbia and for the first time Bosnia and Herzegovina. 25 papers in five thematic categories were presented at the Symposium: Strategies, Principles of Sustainable Preservation and Constant Education, Revitalisation of Heritage with Finances from International Funds, Status of Renovated Cultural Heritage, Interpretation and Perspective (the relationship of the community and experts with heritage), Integral Protection as the Basis of Sustainable Development, Renovated Heritage – New Value.[24]

The main findings of participants in the Symposium in Bitola were:

- it is necessary to preserve the diversity of traditional rural areas in the social and landscape context, as the current state and perspective of cultural heritage are not appropriate,
- all involved in safeguarding heritage should undergo training,
- cultural heritage should also be protected with the help of spatial plans and monitoring,
- financial means from European funds are a new opportunity for the renovation, protection, preservation and interpretation of heritage,
- the town of Kruševo and the city centre of Bitola meet the requirements to be listed on the national UNESCO World Heritage trial list, so the institutes and museums in Bitola and Prilep should prepare justifications, and
- interpretation of heritage is the basis for its use and appropriate understanding (Strgar and Štepec 2020).

Another very important contribution to the last consultation was the decision by the organising committee to finally transform the Symposium into the main meeting of conservators in Southeast Europe, and that its professional level be raised to a scientific level, so the members of the committee invited Sanja Lončar from the Department of Ethnology and Cultural Anthropology at the Faculty of Arts of the University of Zagreb and Neža Čebron Lipovec from the Department for Archaeology and Heritage of the Faculty for Humanities of the University of Primorska to collaborate. The above teachers and researchers have since 2020 been members of the permanent organising committee of the international Symposium of Ethnologist Conservators.

The Symposium's contribution to the development of conservation theory and practice

In the introduction to the proceedings that were published in 2018 at the time of the seventh Symposium of Ethnologist Conservators of Slovenia and Croatia, the Director General of the Institute for the Protection of Cultural Heritage of Slovenia Jernej Hudolin described the importance and role of the symposia of ethnologist conservators with the following words:

"These symposia surpass the regular, professional working meetings of conservators from different countries, as they represent an interdisciplinary exchange of experience, knowledge, information and the transfer of good practices, which is absolutely essential for safeguarding and preserving cultural heritage. It is extremely significant that the Symposium's organising committee has succeeded in attracting the participation of conservators from other republics of the former Yugoslavia, within which we had closer contacts and more intense collaboration until 1991 (e.g. Serbia and Macedonia). This is undoubtedly thanks to the diverse content and interdisciplinary nature of the long-term programme of development, which the organising committee determined at the very outset. An integral and interdisciplinary approach to conservation at the consultations has also been met with a very positive response from fellow conservators specialised in other subjects working on the protection of monuments, from museum curators and other experts from various educational and research institutions, as they showed with their participation in consultations both as listeners and lecturers. The systematic approach of the organising committee has undoubtedly contributed to the high quality realisation of all consultations so far, at which numerous current topics have been discussed and at which conclusions or guidelines have been determined for the further expert work of conservators." (Strgar 2018: 7)

After twenty years we can say that the Symposium is becoming the main expert meeting of conservators in Southeast Europe. We are convinced of this due to its international nature, its continuity, content and ultimately also its individual statistical data.[25]

Twenty continuous years of the Symposium is an exceptional organisational achievement by the organising committee members,26 however, this would not be possible without the interest expressed by monument protection institutions from countries whose experts collaborated at the consultations, and without the good inter-state cooperation of ministries of culture. The Symposium has from the outset been morally and financially supported by the leadership of the Institute for the Protection of Cultural Heritage of Slovenia and the Directorate for the Protection of Cultural Heritage at the Croatian Ministry of Culture.

The Symposium's main contributions to developing the monument protection service and conservation theory and practice are presented below. For the sake of clarity, they are structured according to individual thematic categories and presented in two groups. The first group contains proposals and guidelines for improving strategies to safeguard cultural heritage and the organisation of monument protection services. The second group contains proposals and guidelines for improving the methodology of professional conservation work.

Contributions to the strategy of protecting and preserving cultural heritage and the organisation of monument protection services

Ensuring the integral protection of cultural heritage

It is necessary to preserve the diversity of traditional rural areas both socially and in terms of landscape. It has been found that the current state of and prospects for cultural heritage are not appropriate.

Traditional rural settlements with residential, agricultural and commercial buildings are a very important part of the spatial and cultural identity of a region (see Koželj Delak 1994; Koželj Delak 1995). The population of these settlements is the guardian of material and intangible heritage, comprising a variety of knowledge, skills, and other phenomena of immaterial and social culture. Nevertheless, traditional rural settlements are facing decay due to people leaving, society being focused on cities, long years of marginalisation by cultural, spatial and economic policies, which is also reflected in the lowest level of financing for renovation not only of vernacular architecture, but also of other everyday buildings,[27] and in programmes to revive village centres and the intangible heritage in them (knowledge and skills). In protected rural settlements it is necessary to ensure modern utility infrastructure, schools and nurseries to keep young people living in the countryside. In settlements in which traditional constructions made of stone, brick, wood and earth have been preserved, their continuity must be ensured with the help of spatial documents, as this kind of traditional architecture can make an important contribution to sustainable development. In larger protected areas (e.g. natural parks), where there is a mixture of natural and cultural heritage, integral protection must be provided more consistently, this being a condition for the uniform protection of natural and cultural content, and for a high quality of life for people in these areas and sustainable economic development.

21 The seventh Symposium of Ethnologist Conservators was prepared by the organising committee consisting of Dušan Strgar and Dušan Štepec from the Institute for the Protection of Cultural Heritage of Slovenia, the Novo Mesto Regional Unit, Boris Mravlje from the Institute for the Protection of Cultural Heritage of Slovenia, the Ljubljana Regional Unit, Helena Rožman from the Krško Cultural Centre, Ana Mlinar and Zoran Čiča from the conservation department in Zagreb.

22 Dušan Strgar (ed.) (2018): *Proceedings of the Seventh Symposium of Ethnologist Conservators of Slovenia and Croatia: Managing Cultural Heritage: from Evaluation to Interpretation, Krško, 11. 10.–13. 10. 2017.* Ljubljana: Institute for the Protection of Cultural Heritage of Slovenia.

23 The Symposium was prepared by the organising committee consisting of Viktorija Momeva Altiparmakovska, Vesna Kočankovska and Zoran Altiparmakov, all from the National Institute and Museum of Bitola, Ana Mlinar from the conservation department in Zagreb, Krešimir Mijakovac from the conservation department in Slavonski Brod, Dušan Štepec and Dušan Strgar, both from the Institute for the Protection of Cultural Heritage of Slovenia, Novo Mesto Regional Unit.

24 The papers are expected to be published in a collection by the end of 2020.

25 So far 86 different experts from five countries have presented papers at the symposia. Over 170 different papers have been presented and 88 conclusions reached.

26 It is possible to see that this is an exceptional organisational achievement when compared with the international consultations organised by ICOMOS Slovenia and ZVKDS since 2014 in Bled. With a stronger organising team and greater financial support, they have so far succeeded in organising three consultations.

27 In ethnology we talk about architecture of everyday life; this includes all the aspects of architecture that are the subject of historical research from an ethnological point of view, and this is the case in all social and professional groups, in all geographical environments and in all periods (Hazler 2004: 579; Koželj Delak 2008: 51).

Stopping the dilapidation of immovable cultural heritage

Architecture of everyday life, usually dealt with by ethnologist conservators, is an extremely important part of a country's cultural identity. Buildings are usually poorly maintained, empty and deteriorating. Architecture of everyday life is the most frequent form of immovable cultural heritage and is at the same time its most endangered category. Due to the increasing pace of development, a different way of living and managing economic activities, combined with ineffective protection measures, this form of architectural heritage is deteriorating and disappearing most rapidly.[28] The competent ministry must therefore urgently provide systemic and interventional financial resources for its renovation, presentation and interpretation. In order to stop such heritage deteriorating, it must be safeguarded in the classic way *in situ*, and in conservation practice supplementary forms of protection such as open-air museums and eco-museums must be introduced as soon as possible. Such museums play an important role in preserving and popularising cultural heritage, so they must be included in the systemic and institutional protection and become part of the strategy for safeguarding cultural heritage (see Štepec, Hazler 2018: 111). An international colloquium was dedicated to finding systemic solutions for safeguarding cultural heritage with the help of open-air museums and eco-museums. It was entitled Open-air Museums and Eco-museums as a Challenge for Contemporary Protection and Popularisation of Cultural Heritage – the case of the Land of Hayracks (Dežela kozolcev) and was organised in Šentrupert, Dolenjska, on 31 March 2014.[29]

Connection and collaboration between ministries

The existing measures to safeguard and preserve cultural heritage are not effective enough to be able to stop the intensity of dilapidation of individual forms of heritage, the most endangered form being ethnological immovable cultural heritage. Measures for the protection of cultural heritage by individual ministries are not mutually harmonised and suitably incorporated into legislation. So for example, the legal protection of heritage is not supported by tax relief and other forms of financial support for heritage owners. The particularity of protecting and preserving cultural heritage is not sufficiently incorporated into spatial and architectural legislation etc. The existing legislation must be supplemented and standardised in such a way that it will be able to effectively support the strategy for safeguarding and preserving cultural heritage. Due to poor interministerial connections and cooperation, legislation is not harmonised and is not acceptable for the field of protecting and preserving cultural heritage. Better synchronisation of work between ministries is essential and urgent, especially between ministries responsible for culture, education, the environment, agriculture, the economy and finance.

Financial resources for renovation of heritage

There are no direct state financial incentives for owners of cultural heritage, and they are smaller every year for owners of cultural monuments. Financial resources from European funds cannot make up this deficit. Most vulnerable are the socially disadvantaged owners of immovable cultural heritage, and they are not capable of maintaining or restoring heritage or cultural monuments without state co-financing. We find that co-financing the renovation of cultural monuments from public tenders is not effective as the funds earmarked for this are markedly low, and have also been disproportionately distributed considering the numbers of individual types of cultural monuments and their significance. In future, the Ministry of Culture should provide more public funds through public tenders for co-financing the renovation of cultural monuments. The conditions for applying to public tenders should be prepared in such a way that financial resources will be equally obtained by owners of all types of monuments as well as the owners of the most important monuments in the country. The Ministry of Culture and the Ministry of Finance should provide tax relief and other measures for owners of cultural heritage with which they would encourage them to preserve and renovate it. To save the most endangered heritage in the country, the Ministry of Culture must provide emergency funding on an annual basis or establish a special fund or public fund for (co)financing the most endangered heritage.[30]

28 Ethnological architectural heritage is the most endangered form of immovable cultural heritage in Slovenia. On the basis of individual analyses of *in situ* states, we find that in the space of 10 years in Slovenia, on average 16% of registered ethnological architectural heritage falls into ruin. We can estimate that the percentage is similar or even worse in countries in the territory of the former Yugoslavia, where besides destruction, dilapidation and poor maintenance of heritage, there are also cases of inappropriate preservation in the form of so-called ethno houses, and of the illegal export of architectural heritage and its constituent parts abroad for equipping tourist farms and restaurants.

29 The colloquium in Šentrupert was organised on the basis of one of the conclusions of the 5th Symposium, namely that a special one or two-day colloquium be organised in the period between two symposia, to focus on an issue found during the Symposium to need special attention. The first such colloquium was organised in Šentrupert, Dolenjska, in 2014 on the theme of open-air museums and eco-museums, and was prepared by the programme and organising committee consisting of Zoran Čiča, Vito Hazler, Ljubo Lah, Alenka Lamovšek, Ana Mlinar, Urša Repše, Dušan Strgar and Dušan Štepec.

30 It must not be allowed to happen that the most important cultural monuments in the country fall into ruin in full sight of professionals and the lay public because there are no emergency funds to stop the dilapidation.

Personnel policy

The development of conservation, the poor physical state of heritage *in situ* and the existing personnel structure in monument protection services demand a change in personnel policy meaning new recruitment and an increase in the number of experts, those most lacking being ethnologists and cultural anthropologists, historians, mechanical and civil engineers, architects and structural technicians.[31] This is why those responsible in monument protection services must cooperate with the competent ministries in devoting more attention to HR policy and planning the rejuvenation of professional staff in the sense of ensuring interdisciplinarity and continuity in the transfer of knowledge from older to younger conservators. This process is particularly important as the conservator is not yet fully prepared for work after graduating, and requires years to develop expertise through experience in practical conservation work. From this point of view it is necessary to improve traineeships and training programmes with interdisciplinary content, and put more emphasis on mentorship and its role in staff training.

Interdisciplinary study of conservation

The existing study programmes in the first and second cycles of university studies do not provide enough experiential learning, which is very important in conservation work. Conservators with practical experience should therefore become involved in the education and training processes. At the PhD level the effective functioning of the interdisciplinary study programme of conservation must be ensured. All other forms of training for conservators both at Slovenian and foreign universities (study, courses), as well as their participation in consultations and conferences must be supported, as these are also opportunities for acquiring new knowledge and exchanging experience.

Including content dealing with the protection and preservation of cultural heritage in the curricula of primary and secondary schools

General awareness of the importance of protecting and preserving cultural heritage is still low amongst heritage owners and users so it is necessary to teach the youngest members of our society about this in primary and secondary schools.

It was estimated that pupils in primary and secondary schools, as well as students at universities, were not taught enough about heritage and its renovation, so it will be necessary to introduce content on heritage into school curricula so that pupils value it more, preserve it, use it correctly and interpret it appropriately. School curricula must include content which will encourage pupils to have a positive attitude towards natural features of interest and cultural heritage, a love for what has been inherited and a feeling of responsibility for inherited heritage and care for its protection. Conservators too must be aware of the public nature of their expert work, so lectures, conversations and other forms of cooperation should pass on the value of safeguarding and preserving cultural heritage to all social groups, especially the youngest, school-age children and secondary school teenagers, and in this way try to contribute to raising awareness in society.

Education and training for professionals and all involved in renovating cultural heritage.

In conservation there is a tangible lack of possibilities for planned education and training for conservators, other experts, craftsmen, owners and users of heritage, and other people interested in preserving cultural heritage. Meanwhile, the state must provide training centres for carrying out workshops for the renovation of heritage in the fields of stonemasonry, carpentry, bricklaying, roofing, metalworking, painting-decorating etc., i.e. for all trades that are most often needed when renovating heritage. Such centres should be intended for organising experiential workshops and courses for the training of all interested in cultural heritage renovation. We are coming to the realisation that without trained craftsmen who master traditional construction techniques and know how to use different materials, all efforts to preserve cultural heritage will be in vain in the long run. On the state level a list must be drawn up of trained craftsmen in the field of renovating cultural heritage. Financial support and other conditions for the continued transfer of their skills to younger generations must be systematised.

Use of cultural heritage according to professional standards

In the field we often witness the inappropriate exploitation of cultural heritage in tourism, which is a consequence of low awareness, poor knowledge and unfamiliarity with the importance of the economic and social potential of cultural heritage by those planning tourist development and products. Conservators must do their work in dialogue with the owners of cultural monuments and heritage, and all interested groups, so it is important we remain in communication with them throughout, and that we pass on our knowledge to them in different forms (e.g. discussions, roundtables,

31 The democratisation of heritage in the sense of pluralisation and authorising heritage managers is a challenge for protection services to which they cannot effectively and successfully respond with the existing deficient staff structure. There is an obvious lack of ethnologists and cultural anthropologists, structural technicians, teaching staff, mechanical engineers, historians etc.

lectures etc.) and inform them in this way about the importance of safeguarding and preserving heritage. To improve the situation it is necessary to take care of plans for managing and interpreting buildings and areas of heritage. It is necessary to establish regular and continuous cooperation with the tourist sector and provide it with professional assistance in including heritage in tourism products. The potential of cultural heritage should also be included in other economic sectors such as agriculture, where a significant synergy may be expected with open-air museums and eco-museums in promoting the preservation/revitalisation of the rural countryside and its sustainable development.

Contributions to the methodology of professional work in conservation

Ensuring the integral and holistic protection of cultural heritage

In conservation there are evident unbalanced protection interests, scattered throughout the classic limited domains of individual professions. As a result of this, cultural heritage is often not dealt with integrally, i.e. in all its various forms and with all its constituents, from the cellar to the attic. It is also frequently not dealt with in an interdisciplinary way, from the different points of view that can be provided by the professions present in the monument protection service. This is why ethnologist conservators should no longer deal only with the traditionally prescribed agricultural architectural heritage, but should also become more involved in market towns and cities, and establish an interdisciplinary protective approach. Ethnologist conservators must be involved in work dealing with all types of heritage.

Ensuring unified professional work in conservation

The professional standards in conservation that have been determined by different professions,[32] must be unified. Fundamental conservation literature, for example a basic introduction to conservation and a glossary of conservation terms should urgently be published. Such fundamental literature will make a significant contribution to critical theoretical deliberation about the development of conservation, its current role in modern society, the current situation and challenges in the future, to unifying practical expert work and to helping other professions understand conservation. The focus of conservation work should no longer be on types of heritage that should exclusively be dealt with only by a specific profession, but on interdisciplinary aspects that are contributed by different professions with their own work methods.

Heritage evaluation system

Evaluating heritage is an important task of conservators, so evaluation criteria in the monument protection service must be formed as a professional standard, which will take into consideration the multi-disciplinary approach of the conservation profession. The basis for forming an evaluation system should be the value system that is valid for evaluating and managing world cultural heritage. Alongside this, the specific criteria of individual professions present in the monument protection service should also be taken into consideration. It should also not be forgotten that evaluation is subjective. To help make evaluation more objective, numerical evaluation should be used alongside the descriptive form. It should be in the form of a numerical matrix – this is evaluation with the help of points, which enables comparative evaluation of heritage.

Guidelines for ensuring authenticity in the renovation of wooden architectural heritage

The authenticity of renovation of wooden architectural heritage should be ensured with prior dendrochronological and chemical studies of wood to determine what kind of wood it is, its age, and how much it has been damaged. All interventions made on wooden architectural heritage must be precisely architecturally documented, as the patina that forms on wood over time covers up new interventions made on the building. The new wood with which we replace the old decayed wood does not need to be chemically treated against woodworm or the effects of weather and climate. Neither does it need to be painted because it will form a patina on its own over time. If necessary and if justified, the decayed sections of wood can be impregnated with a hardener. It is, however, essential that the same kind of wood is used and that it is shaped using the same techniques as the original wood.

32 In the field of ethnological conservation, special mention must be made of the contributions by Vito Hazler and Zvezda Koželj. Of Hazler's fundamental contributions on expert standards for the work of an ethnologist in the monument protection service we should mention an article entitled Proposed Standards for the Work of Ethnologists in Monument Protection (Hazler 1998) and a work entitled Demolish or Renovate? The Historical Development, Analysis and Model of Ethnological Conservation in Slovenia (Hazler 1999). Among the papers written by Zvezda Koželj there is an important article entitled A Programme Model for an Ethnologist Conservator (Koželj 2008) and a work entitled Ethnology and the Safeguarding of Natural and Cultural Heritage (2009).

Studying different types of heritage and publishing studies

It is generally found that in conservation too few fundamental studies of individual types of architectural heritage are undertaken. It is essential that they be studied topographically and the results published in monographs. Well-studied heritage is the basis for all further conservational procedures so research, analysis and publishing are of great importance in the monument protection service. Those types of architectural heritage that are in danger of falling into ruin because they are no longer in use, must urgently be integrally studied and analysed. Such publications require not just conservators but also other experts in the field of safeguarding and preserving architectural heritage: spatial development planners, those employed in tourism and education etc.

Interpreting heritage as the basis for understanding it and its function

While learning about heritage, it is necessary to also plan interpretational content and the form of interpretation, which must be correctly based on facts as it demands the presentation of all aspects of life and work so the visitor understands them. This is why presentations should be as complete as possible with the help of contemporary tools. In keeping with this, the relevant professions should be popularised to a greater extent, as should the results of work, both locally and further afield. Nowadays, this is becoming one of the profession's most important activities, which is however not sufficiently included in everyday professional work. In any event a stronger, more incisive and effective approach to achieving a more appropriate and integral interpretation will be necessary.

Establishing a network of on-site conservation staff

The monument protection service must also listen to individuals who perceive looking after cultural heritage as a special value, and who through their work contribute to raising awareness about safeguarding and preserving it, or who strive to renovate it through their work. These individuals are an exceptional help to conservators in the field as well as being their confidants. They are the link between heritage owners and conservators, they play the role of mediators, inform conservators about interventions in the field, study cultural heritage as amateurs, collect material about it and raise public awareness about the importance of protecting and preserving it. They must be connected with each other, provided with internal training and formally involved in preservation, as they are important informers about the state of heritage and interventions on it in the field, and about needs for urgent interventions.

Managing heritage

When planning cultural heritage management it is necessary to encourage the involvement of local and heritage communities which preserve their own heritage as they actually live with it and are an important link between professionals and heritage owners. Protecting and preserving cultural heritage is the responsibility of all people, not just the public service for protecting cultural heritage. Local and heritage communities must be included in the process of renovating heritage in public ownership at the very outset, in the phase of planning content and interventions, and they must be dealt with as equal partners, respecting their wishes and interests so the heritage will come alive inside the local community after it is renovated.

Including new findings in conservation practice

One of the important goals of the Symposium of Ethnologist Conservators is for findings and conclusions to help the monument protection profession be better organised and have more expertise. This is a demanding and long-lasting process as it depends on implementing cultural heritage protection policies in individual countries and on the visions and ambitions of the current national leaderships of monument protection services. Implementation is closely connected with protection legislation and rules, with the cultural heritage protection strategy and also with introducing principles of excellence and different quality management tools.[33] We have been aware of all this in the organising committee since the very beginning, and this is why we have been striving throughout to communicate the findings and conclusions of each symposium regularly and consistently to all the competent line ministries, specialist services and our leaders, whom we expect to ensure suitable verification and implementation.
After twenty years we can see that there are fewer results than we would like.[34] Nevertheless, we can observe some

33 While protection legislation, rules and strategies depend on cultural policies, quality management depends above all on the efforts of the ZVKDS leadership. The ZVKDS can do most in this area also as regards introducing new realisations and conclusions into conservation practice. The term quality management means the introduction of different methods and models of determining quality and efficiency in the organisation (e.g. EFQM – European Foundation for Quality management, CAF model – Common Assessment Framework etc.), with which we can achieve targets such as increase the satisfaction of clients and employees, improve performance and efficiency, control costs, improve processes and the transparency of operation, improve reputation and recognisability (see Udovč 2016: 21–23).

34 There are several reasons why the new finds and conclusions from

changes in Slovenian conservation practice and can more or less directly ascribe them to our efforts at the symposia, e.g. the beginning of systematic formation of professional standards, accepting the open-air museum as an additional form of protecting (movable, immovable and intangible) cultural heritage, introducing traditional technologies when renovating cultural heritage and forming methodologies for conservation procedures in the renovation of wooden architectural heritage.

With this Symposium we have succeeded in encouraging the expert management to begin preparing professional standards.[35] We first warned of their necessity in the Symposium at the end of 2002 (Strgar, Mlinar, Petrić and Štepec 2002: 35), then in 2013, when we discussed the topic of mentorship in monument protection services, among other things (Strgar 2015: 259), and then again in 2015, when we discussed the system of evaluating cultural heritage (Španiček 2018: 303). The above conclusions connected with professional standards were presented at the institute's expert council in 2016, which consequently resulted in the adoption of the first internal instructions for implementing the public service of the ZVKDS, i.e. *Protocol of procedures for management and decision-making in solving expert conservation questions* (2018).[36]

An important effect of the Symposium and its conclusions was in the field of planning and carrying out conservation interventions in open-air museums. One of the conclusions reached at the Symposium in the Trenta Valley in 2013 was that existing models of safeguarding cultural heritage had to be upgraded and supplemented with other forms of active protection, i.e. with open-air museums and eco-museums (Strgar 2015: 259). On this basis, an international colloquium with a roundtable entitled *Open-air museums and eco-museums as a challenge for contemporary protection and popularisation of cultural heritage – the case of the Land of Hayracks (Dežela kozolcev)* was organised in Šentrupert, Dolenjska, in 2014. At this colloquium, concrete recommendations for cultural policy planners at state and local community levels were adopted, stating that open-air museums and eco-museums should join the future strategy of protecting cultural heritage as an additional form of safeguarding and popularising cultural heritage (Štepec and Hazler 2018: 8).

A result of the Symposium that we would like to highlight is the efforts to use traditional technologies for renovating cultural heritage. The first deliberations about a systematic solution to this question date back to the early 1990s, when a working group of ethnologist conservators, acting upon the initiative of Vito Hazler in 1993,[37] began drawing up the first list of reference craftsmen who still master traditional technologies. This is why it is no surprise that the reason for the beginning of the symposia of ethnologist conservators was the specific case of Croatian colleague Ana Mlinar asking Dušan Strgar in Novo Mesto for help in finding a roof thatcher (Strgar 2001: 58). The issue of finding craftsmen trained for work on cultural heritage and establishing a list of them therefore became a constant theme of all symposia, as this matter has been included in the long-term programme of cooperation of Slovenian and Croatian ethnologist conservators from the very beginning. This issue was tackled for the first time at the Symposium in Brežice in 2002, at which the conclusion was reached that "the Ministry of Culture together with the monument service should consider as a priority, and prepare as quickly as possible, rules for the issuing of licenses for work on heritage" (Strgar, Mlinar, Petrić and Štepec 2002: 36). Despite all efforts, we still do not have a transparent and verifiable list of trained craftsmen for work on cultural heritage in the monument protection service.[38] However, we have succeeded in defining vocational standards and a catalogue of professional knowledge and skills in the national vocational qualifications system for eight professions in the field of traditional vocations that are most often needed when renovating cultural heritage.[39]

the Symposium were not implemented in conservation practice to a greater extent, one of them being that the ZVKDS leadership did not succeed in meeting standards in the field of managing and improving organisation, as this domain was until recently considered below average (see. Udovč 2018: 61).

35 *Instructions (1–6) for implementing the expert work of the ZVKDS*, the first expert standards for implementing expert work at ZVKDS after the service began being centralised in 1999, were prepared back in 2002. They were prepared by Janez Mikuž, advisor to the programme director at the time, and they were confirmed by the ZVKDS expert council on 10 December 2002. The instructions include guidelines for naming responsible conservators/restorers and working groups to work on cultural monuments of national importance and determine their tasks, for evaluating the state of cultural monuments, for drawing up project tasks for interventions in cultural monuments, for making architectonic recordings of items of cultural heritage, for developing conservation-restoration programmes for interventions in cultural monuments and for determining construction-restoration phases in the process of renovating cultural monuments.

36 Dušan Štepec highlighted the problem of expert standards at the third regular session of the ZVKDS expert council (8 December 2016), in connection with the proposed protocol for making expert decisions in solving expert conservation matters, and encouraged the president of the expert council at the time Matej Klemenčič to place this matter on the agenda of the first regular session organised on 12 January 2017.

37 Letter from Zvezda Koželj dated 17 August 1993 and addressed to ethnologist conservators, in which she provided details about three craftsmen who had references of having worked on cultural heritage, and Vito Hazler's request that the working group of ethnologists conservators should prepare *"an almanac of craftsmen with the most essential details and their references"*. The letter is kept by the ZVKDS, Novo Mesto Unit, in the archive of documentation connected with the operation of the working group of ethnologist conservators.

38 In over 20 years, the Ministry of Culture has not managed to set up a clear and publically accessible list of professionally trained craftsmen for carrying out specialised protection work as defined in Article 105 of the Cultural Heritage Protection Act (2008).

39 Occupational Standards for the traditional professions of stonecutter, roofer/sheet metal worker, joiner, stove maker, painter/decorator and sign writer, carpenter and bricklayer were drawn up in 2015 by the working group for revising the catalogue of standards of professional knowledge and skills, consisting of Jožef Drešar (GNOM, d.o.o.), Maja Štembal Capuder (Secondary School of Construction, Surveying and Economics in Ljubljana), Dušan Štepec (ZVKDS), Mateja Kavčič (ZVKDS), Mateja Hafner Dolenc (Association of Historical Towns of Slovenia), Živa Deu (Faculty of Architecture) and coordinator Barbara Kunčič Krapež (Institute of the Republic of Slovenia for Vocational Education and Training). The occupational standard for the profession of shingler was prepared in 2015 by the working group for preparation of the professional standard consisting of Tomaž Bergant (Triglav National Park), Zdenko Cesar (Slovenian Forest Service), Dušan Štepec (ZVKDS), Saša Roškar (ZVKDS), Janez Krnc (Zavod Marianum), Petra Krnič (BB, izobraževanje in usposabljanje, d.o.o.) and coordinator Barbara Kunčič Krapež (Institute of the Republic of Slovenia for Vocational Education and Training).

40 Ethnological conservation began to develop in Slovenia after 1982, when ethnologist conservators united to form the Working Group of Ethnologist Conservators at the Slovene Ethnological Society. It developed more intensively in the second half of the 1980s when a project team prepared content for the Ethnological Conservation course, which Vito Hazler began to lecture on in academic year 1989/90 (Delak Koželj 2009: 48–49; Hazler 2004a).

41 Ethnologist conservators are eligible for the Stele Prizes, which are awarded for outstanding achievements in the field of conservation by the Association of Conservators of Cultural Heritage of Slovenia. Pioneering work was done by Vito Hazler, Stele Prize-winner in 1994, and Vladimir Knific, Stele Prize-winner in 1999. Recently, Stele Prize-winners have been members of the Working Group of Ethnologist Conservators at the Institute for the Protection of Cultural Heritage of Slovenia: (2013), Dušan Štepec (2014), Andrejka Ščukovt (2015) and Eda Belingar (2018). The work of ethnologist conservators has not gone unnoticed internationally either. In 1992 the renovated Kavčnik Homestead was nominated for the European Museum of the Year Award, and candidates for this award included the open-air museum in Rogatec in 1997 and Sečovlje Salina Landscape Park in 2004. The latter received the international Europa Nostra Prize in 2003 for renovated cultural heritage. Ethnologist conservators had important roles in all three projects. Dušan Strgar received a special commendation from the Ministry of Culture of the Republic of Croatia in 2010 for his work in organising the international Symposium of Ethnologist Conservators of Slovenia and Croatia. The last international achievement of ethnologist conservators is connected with the work of conservators Andrejka Ščukovt, whose work contributed to winning a special Constructive Alps award in 2015 for the renovation of shepherds' huts on Planina Laška seč near Tolmin, and Eda Belingar for having dry stone walling placed on the UNESCO list of intangible cultural heritage of humanity in 2018.

Finally, we must mention that thanks to the symposia the methodology of conservation procedures for renovating wooden architectural heritage is now used. This theme was highlighted at the second Symposium of Ethnologist Conservators in Brežice in 2002. The conclusions of the Brežice Symposium included the adoption of important guidelines regarding conservation procedures in renovating wooden architectural heritage (Strgar 2002: 160–161), which were consistently applied in conservation practice during the setting up of the open-air museum in Šentrupert in the years 2010–2013 (see Štepec and Lah 2018: 176).

Conclusion

In its twenty year history, the international Symposium of Ethnologist Conservators has developed into the only professional conservation meeting which concertedly and continuously brings together the professional findings, knowledge and experience of conservators and other experts in the field of safeguarding and preserving cultural heritage in the countries that emerged from the former Yugoslavia, and facilitates their exchange. By going beyond its initial bilateral cooperation between Slovenian and Croatian ethnologist conservators and gradually spreading to Serbia, North Macedonia and Bosnia and Herzegovina, it is becoming the main conservation meeting in Southeast Europe.

At the forefront of all these professional meetings is always the issue of establishing conservation, which has the longest and strongest tradition in Slovenia out of all the countries in this region.[40] Nowhere else does the monument protection service have as many ethnologists as in Slovenia, who are successful both locally and internationally.[41]

The themes discussed at the symposia included an interdisciplinary approach, which is of key importance for work in conservation and for the comprehensive treatment of immovable cultural heritage. From this point of view, the Symposium was always open not only to ethnologist conservators, but also to conservators of other professions and experts from other institutions who come across the problem of safeguarding and preserving cultural heritage in one way or another. It was the very possibility of different experts coming together to discuss a topic, regarding which they could explain how the problem looked from different professional points of view, that proved to be the right programme orientation for the Symposium. This was emphasised by participants at the ends of the symposia. Another very important role of the symposia of ethnologist conservators was the revival of old close connections and exchanges of experience between conservators in a region in which such links were interrupted by wars in the first half of the 1990s. This is an interesting, diverse and impulsive region, in which the processes that create heritage are very intense, due to the presence of different nations, minorities, ethnic groups, religions, different cultures and ways of life. The views people in this region have on heritage are also diverse. However, this is also a region where Western European and Middle Eastern conservation traditions meet.

For the above reasons, the organising committee will continue to prepare symposia in order to realise the idea that this region offers its own view on safeguarding and preserving cultural heritage and in this way contributes to the development of conservation.

Another special quality of the Symposia of Ethnologist Conservators is the numerous conclusions adopted to serve as guides to those planning the development of protection and preservation of heritage, so that through certain strategic and systematic measures they may improve the state of affairs in the field of protecting and safeguarding cultural

heritage, which due to rapid economic development and globalisation is threatened like never before. At the same time the conclusions are also an aid for the leadership of the monument protection service for improving expert work in conservation.

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Intervju s prof. Ivanom Bogovčičem

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Restavratorska stroka se v zadnjem času, zaostrenim materialnim pogojem navkljub, razvija s hitrimi koraki. Kljub temu pa je vredno pogledati nazaj, kolikor daleč je sploh mogoče. Z našim sogovornikom, upokojenim profesorjem ALUO prof. Ivanom Bogovčičem, bo pogled nazaj tako živ kot tudi zanimiv.
Zelo lepo bi bilo, če bi intervju, tako kot pred leti z Mihom Pirnatom in Tomažem Kvasom, lahko izpeljali ob kavi v ateljeju Restavratorskega centra v Ljubljani. Glede na razmere v karanteni pa moramo prijetno prijateljsko druženje preložiti na boljše čase in si pomagati s tehnologijo ter se pri tem odreči vprašanjem, kakršna se oblikujejo spontano in mimogrede, v živem pogovoru. Kljub temu se ni bati, da bi sogovorniku zmanjkalo zanimive snovi, saj je prava zakladnica spomina.

Izhajate iz izobraževalnega sistema, ki slikarstva in restavratorstva ni tako zelo ločeval. Restavratorska izobrazba je bila pravzaprav nadaljevanje slikarske (ali kiparske). Je to po vašem mnenju dobro ali slabo?
Tako izobraževanje je veljalo le za likovno dediščino. Smo pa nekateri prišli v restavratorski izobraževalni proces, tiste čase magistrski, z določenimi predznanji in izkušnjami, pridobljenimi z občasnim sodelovanjem z različnimi spomeniškovarstvenimi institucijami. Že v srednji šoli sem začel sodelovati z reškim zavodom, kasneje pa z nekdanjim Jugoslovanskim inštitutom za varstvo kulturne dediščine in na koncu še s srbskim zavodom. Strokovno izobraževanje je bilo logično nadaljevanje omenjenega sodelovanja. Menim, da sta sedanja oblika izobraževanja in nabor kandidatov za študij na restavratorskem oddelku Akademije za likovno umetnost in oblikovanje (ALUO) ustrezna in skladna s potrebami po restavratorjih za delo z likovno dediščino.

Kot pedagog ste spremljali prve generacije študentov, ki so se za restavratorstvo odločili že na dodiplomski stopnji. Se mladi, ki takoj vedo, da bodo restavratorji, bistveno razlikujejo od tistih s samopodobo umetnika, ki se za restavratorstvo odločijo šele kasneje?
Prve generacije dodiplomskih študentov so prihajale iz dveh virov. Del populacije so predstavljali naši kolegi iz dejavnosti, ki so želeli nadgraditi svoja znanja še z rednim študijem restavratorstva, drugi del pa je prihajal neposredno iz srednjih šol. Ti so bili praviloma brez predhodnih strokovnih znanj ali izkušenj, zato so za »zagon« pri študiju restavratorstva potrebovali več temeljnih znanj in prvin s področja umetnostne zgodovine ter s področja slikarskih in kiparskih tehnik in tehnologij. Vsi kandidati pa so šli pred tem skozi filter sprejemnega izpita ter so bili o stroki in poklicu dokaj temeljito obveščeni na informativnih dneh. Seveda so prihajali in bodo še vedno prihajali v naše vrste »umetniki«, a se po preverjanju lahko odločajo o nadaljevanju začrtane poti v naši stroki ali pa se preprosto odločijo za drug študij. Vse manj pa je takih, ki bi se odločali za naš poklic po že uhojeni umetniški karieri.
Kot koordinator za obrti in veščine pri Svetu Evrope za Slovenijo sem se s soglasjem »nadrejenih« v Strasbourgu ter s pomočjo in sodelovanjem mnogih strokovnjakov v Sloveniji lotil zagona programa usposabljanja za stavbarske poklice (zidarje, tesarje, kamnoseke in druge), za strokovno delo pri ohranjanju in vzdrževanju stavbne dediščine. Nenehno sem bil priča negodovanju konservatorjev, da nam manjka delavcev s srednjo izobrazbo, ki bi obvladovali počasi zamirajoča znanja in veščine. Trajalo je kar desetletje, da smo vpeljali program na Srednji gradbeni in ekonomski šoli v Ljubljani, delno tudi v Mariboru. A čez leta sem bil globoko razočaran nad neodzivnostjo stroke. Manjka tudi zakonodajna podpora, ki bi spodbujala angažma strokovno usposobljenih stavbarskih delavcev, kajti v prihodnosti se obeta vedno več dela na dediščini in manj novogradenj.

Ste eden od restavratorjev, ki se niso odrekli lastnim slikarskim ambicijam. Kako doživljate restavratorsko dejavnost: kot nekaj bistveno nasprotnega slikarstvu ali kot harmonično celoto z njim?
Študiral sem še po stari shemi, ker druge možnosti v tedanji državi ni bilo. Najprej dodiplomski študij slikarstva in nato nadaljevanje magistrskega študija konserviranja in restavriranja likovnih umetnin. S slikarstvom sem se ukvarjal vzporedno z restavratorskim poklicnim delom, vendar ne v škodo slednjega. Dovolj resno in očitno zadosti uspešno, da sem dobil svoje geslo v Likovni enciklopediji Jugoslavije (Zagreb, 1984). Povzemam bistveno: »... Slika realistične portrete. Odlikuje ga rafinirani kolorizam i psihološki pristup likovima ...« Pri poklicnem delu sem zaznal sinergijo v povezavi obeh poklicev, zato bi pritrdil, da mi je uspelo oboje združiti v harmonično celoto. Vsekakor mi je likovna predizobrazba pomagala pri mnogih odločitvah glede estetskega prezentiranja obravnavanih del.

Mora biti po vašem mnenju restavrator tudi sam umetniško nadarjen? O tem še ni enotnega mnenja, še posebej pa ne danes, ko smo priča ogromnemu napredku v tehnologiji in se zdi, da je restavrator predvsem znanstvenik, tehnik in tehnolog.
Če začnem od konca, razvoj umetne inteligence je še vedno v povojih. V sedanjosti še vedno pričakujem – govorim o ohranjanju likovne dediščine –, da nosi kandidat za študij restavratorstva v sebi trohico likovne nadarjenosti. Vse drugo so znanje, vztrajnost in ostale pozitivne lastnosti, ki jih naša poklicanost nujno potrebuje. Ta hip je razvoj tehnologije in tehnike le dobrodošla izboljšava pri našem plemenitem delu. Kaj bo prinesel razvoj, bodo videli zanamci. Določeni poskusi, povezani z inteligentno tehnologijo, pa so še vedno v razvojni fazi. Morda bodo prej dosegli želene cilje pri obravnavi drugih predmetov dediščine. Vsekakor pa moramo talent povezovati z raziskovalnim in razvojnim delom v skladno celoto.

V času pred osamosvojitvijo Slovenije ste bili močno povezani s kolegi z vseh koncev bivše skupne države. Danes se stiki sicer vzpostavljajo po vsej Evropi, vendar so bežni in priložnostni, omejeni na posamezne projekte, delavnice in simpozije, le redko se izoblikujejo prijateljstva. Še vedno komunicirate vsaj z nekaterimi kolegi iz Hrvaške? Srbije? Makedonije? Bosne? Kaj vam povejo?
Od prvih začetkov leta 1961, še v srednješolskih časih in kasneje, sem bil res vpet v prostor nekdanje države. Kasneje, po stalni zaposlitvi, pa sem svoje obzorje razširil na širši strokovni svet. Tako s sodelovanjem na mednarodnih srečanjih kot z občasno korespondenco. Predvsem je to neposredno okolje, ki je dediščinsko močneje povezano z našim prostorom. Seveda so ostajale vezi s kolegi iz nekdanjih republik, posledično sem recimo sodeloval v strokovni komisiji za dislocirani manastir Dobričevo v Hercegovini ali izdelal strokovno ekspertizo projektne dokumentacije za posege v manastiru Morača v Črni gori. Kolegi vedo veliko povedati o pozitivnih premikih v obdobju po razpadu nekdanje skupne države, a tudi o težavah, ki jih pestijo.
Dosti povezav, bolj ali manj trajnih, sem ustvaril v evropskem prostoru. Leta 1974 sem bil na dvotedenski meddržavni strokovni izmenjavi v Belgiji, leta 1977 pa še v Romuniji. Ohranjal sem tesne stike s kolegicami in kolegi iz Romunije, Madžarske, Poljske, Belgije, Švice, Portugalske, Italije in Avstrije. Po zaslugi kolega Manfreda Kollerja sem bil dvakrat udeležen na konservatorskih dnevih avstrijske spomeniške službe, leta 1995 na Gradiščanskem in leta 2005 v Spodnji Avstriji ter deloma na Moravskem. Na teh srečanjih so bili gosti iz drugih (zlasti sosednjih) držav. Vsekakor ugodno okolje za nove stike in znanstva.
Seveda po sili naravnih okoliščin take vezi usihajo oziroma se prekinjajo. Ambicioznejše kolegice in kolegi se morajo truditi za vzpostavitev povezav v širšem prostoru. Eno je spremljanje strokovne literature tudi po spletu, drugo pa so povezave z restavratorji po svetu zaradi neposrednih izmenjav dragocenih izkušenj.

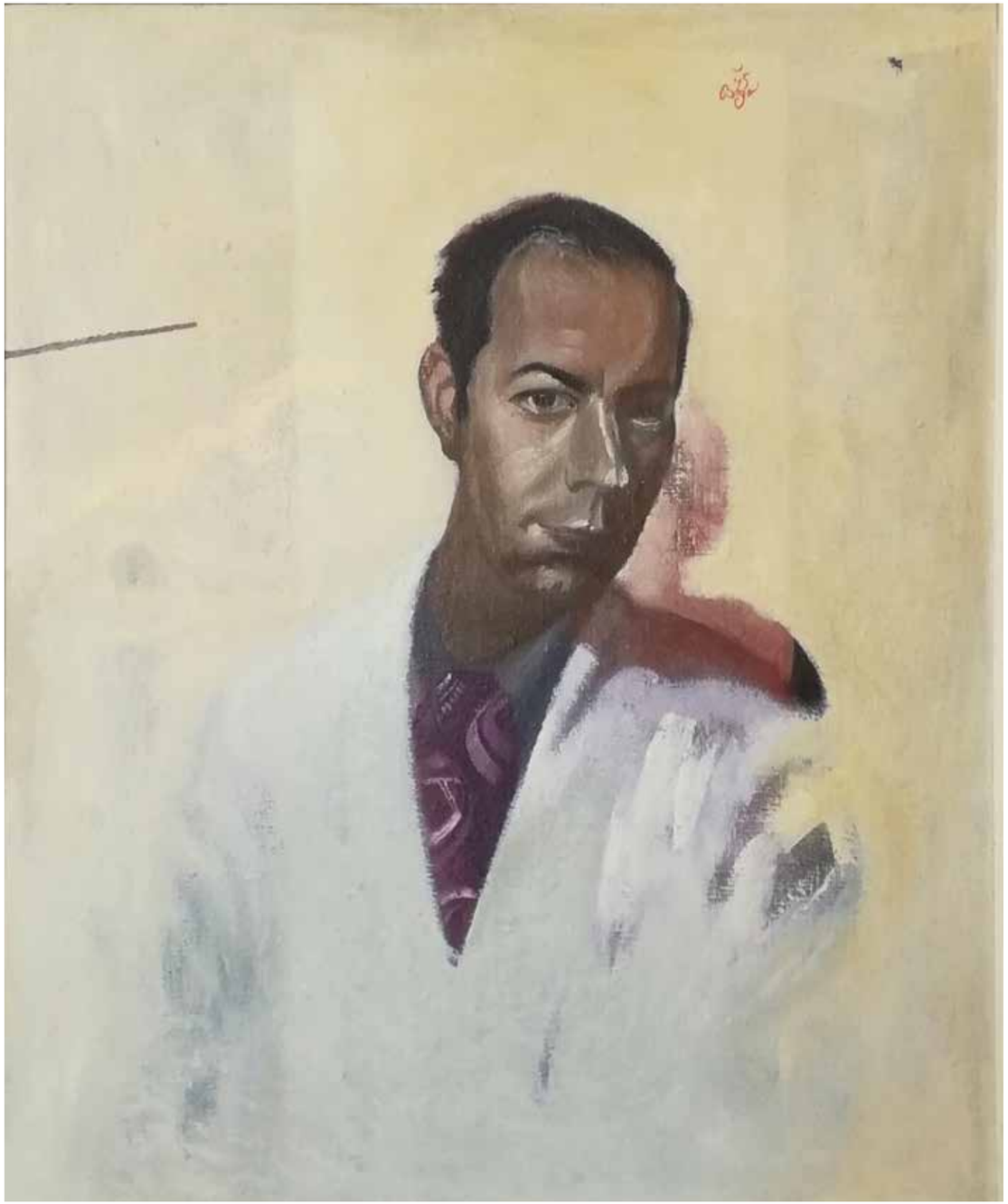
Zdaj pa obvezno vprašanje za vse: Najljubši projekt v karieri? In najlepši spomin? Če ni oboje kar eno in isto.
Seveda takoj pomislim na vprašanje materam: »Kateri otrok vam je najljubši?« Težko vprašanje! Je to morda večletno »romanje« v Turnišče ter prezentacija stenskih slik Janeza Akvile iz Radgone in drugih mojstrov v stari cerkvi Marijinega vnebovzetja? Je to prezentacija mozaičnega kompleksa v krstilnici emonske bazilike? Morda rerestavratorski poseg v Hrastovljah, kjer mi je uspelo interdisciplinarno združiti več strokovnjakov, da smo zbrali tehtne izsledke za izvedbo projekta? Morda krizno reševanje stenskih slik po rušilnem potresu v Posočju leta 1976? Vsekakor nekaj od tega.

»Rekonstrukcija bazenčka starokrščanske bazilike sodi med moja prva dela na začetku poklicne kariere, ... ob koncu kariere pa Laibov oltar.«

»V pedagoški službi sem sprejel terenska predavanja kot redno obliko dela s študenti restavratorstva in s študenti umetnostne zgodovine.«

Glede na to, da je velik del naše dediščine cerkvenega značaja in da so župniki hočeš nočeš njeni prvi skrbniki, bi si z njihovim ozaveščanjem naša stroka lahko izjemno olajšala delo. Na Teološki fakulteti ste predavali osnove spomeniškega varstva. Kakšna je bila usoda tega sodelovanja?
Neposrednih predavanj na Teološki fakulteti nisem imel, pač pa sem vsako leto sprejemal študente, ki so zaključevali študij teologije in se nekateri pripravljali tudi za delo v župnijah. Ravno zato jim je ob prihodu v naše ateljeje veljal moj pozdrav: »Dobrodošli, bodoči skrbniki največjega dela naše kulturne (likovne) dediščine!«
To je bila primerna oblika njihovega ozaveščanja o pomenu ohranjanja kulturne dediščine nasploh, z neposrednim vpogledom v naše strokovno delo in cilje. Vodil sem jih od ateljeja do ateljeja ter jim skupaj s sodelavci odstiral tančice našega poslanstva. S Cerkvijo smo organizirali tudi posvete za širše duhovniško občestvo.
Zavzemal sem se za pripravo in postavitev priložnostnih afirmativnih razstav v obravnavanih objektih, ne le za župnike, temveč za lokalno prebivalstvo. S tem smo jih uvajali tudi v kasnejše obveze po rednem vzdrževanju restavriranih umetnin ter o nujnosti obveščanja strokovne službe o vseh morebitnih škodljivih spremembah na teh objektih.
No, omenjamo sicer skrbnike dediščine v cerkveni lasti. Enako pomembno je, da skrbimo za ozaveščanje tudi drugih lastnikov in ne nazadnje mladine. V ta namen sem opravil nešteto vodstev od osnovnošolske mladine do študentov. V devetdesetih letih prejšnjega stoletja sem kot delavec Restavratorskega centra Republike Slovenije (RC) pripravil manjšo mobilno razstavo o ogroženosti in ohranjanju likovne dediščine. Razstavo sem postavil v Osnovni šoli v Novem Polju ter kasneje še v moji Osnovni šoli na Veliki Dolini. Uspeh je bil nad pričakovanji.
V obeh primerih so prireditev organizirali v okviru kulturnega dne, ki so ga popestrili še z glasbenimi, gledališkimi, recitatorskimi in drugimi vložki. Pripravili so manjši »muzejček« od doma prinesenih »muzejskih« predmetov. Dan so popestrili celo s kulinaričnim deležem nesnovne kulturne dediščine. V Novem Polju je kasneje izšla manjša publikacija o Zadobrovi. Na Veliki Dolini pa so natisnili nekaj priložnostnih dediščinskih biltenov. Razstavni posterji so po uvodnem navdušenju obtičali v depojih RC-ja. Popularizacijsko delo z najmlajšimi je nujna in neprecenljiva sestavina našega poslanstva.

V svoji generaciji ste med restavratorji prednjačili po številu objav. Mnogim praktikom je teorija odveč, vi pa ste jo visoko cenili.
V začetku februarja 1970 sem se na povabilo zaposlil v tedanjem Zavodu za spomeniško varstvo Socialistične republike Slovenije. Kolega Emil Pohl je odhajal v Zagreb, zato so mene povabili, naj prevzamem nedokončane Pohlove projekte, predvsem prezentacijo že omenjenega mozaičnega kompleksa emonske bazilike. Priznam, da sem bil na začetku malce negotov in plašen. Celo toliko, da si po odhodu Franceta Kokalja v profesuro (ALUO, 1973) nisem drznil odkloniti prevzema njegovega mesta vodje restavratorskega oddelka. Tako sem postal s tridesetimi leti odgovoren za krhko restavratorsko jedro na zavodu. Delo sem opravljal nadvse resno in zavzeto. Že leto kasneje sem bil zaprisežen za stalnega sodnega izvedenca za spomeniško varstvo ter imenovan v uredniški odbor Varstva spomenikov.
Ves čas pa sem opažal pri nekaterih sodelavcih v zavodu bolj ali manj podcenjevalni odnos do nas restavratorjev. Zavedal sem se, da ne moremo ostati le »praktiki«. Le z razvojem stroke ter poglobljenim strokovnim, razvojnim in raziskovalnim delom si lahko izborimo svoj prostor pod soncem. Seveda v korist kulturni dediščini. Začel sem s pisnimi prispevki v Varstvo spomenikov. Že jeseni 1972 pa sem se na pobudo Ive Curk napotil na 1. Mednarodni kongres o mozaikih v Francijo. Pripravil sem referat, ga predstavil in vzbudil zanimanje pri udeležencih, ki so bili iz vrst arheologov, arhitektov in umetnostnih zgodovinarjev.
Tako sem prebil led nastopanja. Čez mesec dni sem se s podporo Franceta Kokalja udeležil še kongresa The International Institute for Conservation of Historic and Artistic Works (IIC) v Lizboni. To je bil naslednji korak vstopa v mednarodno strokovno areno. Začel sem trdo delo za afirmacijo naše stroke v zavodu in nato v širši slovenski spomeniškovarstveni srenji. V zavodu sem bil imenovan v delovno skupino za pripravo Znanstvenoraziskovalnega programa dela, skupaj z Ivo Curk in Marijanom Zadnikarjem.
Še naprej sem objavljal ter spodbujal kolegice in kolege, naj tudi sami prispevajo svoj delež za dobro stroke in spomenikov. V ta namen sem v začetku devetdesetih let prejšnjega stoletja, ko smo nekako začeli publicistiko (publikacija RES), postavil na noge Bilten, s katerim bi povezali naše vrste s sprotnimi objavami opravljenega dela ter z obveščanjem o dogajanju na področju stroke pri nas in po svetu. Da bi kolegice in kolege pripravil na javne nastope, sem organiziral »petkova srečanja«, na katerih smo nastopali s krajšimi prispevki. Na začetku je bilo med sodelavci čutiti kar nekaj odpora, ampak sčasoma so se privadili tudi na to sestavino našega dela.



»Portreti so stalnica mojega likovnega snovanja. Portret Ivana Fidlerja, ki si je prezgodaj vzel življenje.«

Z mojim odhodom na ALUO v pedagoško službo je vse skupaj zamrlo. V osebni dokumentaciji hranim za spomin prvi dve številki Biltena in nekaj vabil na »petkova srečanja«. Tudi vrsta avtorskih razstav, ki sem jih pripravljal, je imela strokovni in popularizacijski namen. Zlasti sem bil vesel navdušene pohvale Naceta Šumija ob odprtju razstave Nastanek, ogroženost, reševanje likovne dediščine (Gotika v Sloveniji, 1995). Dejal je, da je ta razstava popolnoma na evropski ravni.
Popularizacija našega dela je predvsem naša skrb, vendar je zanjo treba nekaj več volje in napora od golega rutinskega dela. Ves čas sem zagovarjal interdisciplinarnost, skoraj vse pisne prispevke sem zaključeval s to mantro. Na primeru Hrastovelj sem pokazal, da smo zmožni skupinskega pristopa, in vesel sem, da je takega načina dela vedno več, da mladi in manj mladi skrbijo za nenehni razvoj in napredek v restavratorstvu. Teorija je del naše stvarnosti, vendar v simbiozi z visoko strokovnim praktičnim delom. Ne sme biti sama sebi namen.

Z veseljem vzamete v roke vsako novo številko Varstva spomenikov? Kaj pogrešate? Bi kaj spremenili?
Moram reči, da sem do pred nekaj leti bil zvesti spremljevalec dogodkov v širši spomeniškovarstveni srenji, dolga leta tudi sotrudnik v uredništvu in pisec prispevkov. Počasi ugašajo moje povezave. Menjajo se generacije, usihajo kontakti, zato nimam več rednega vpogleda v Varstvo spomenikov.
Še vedno sem (častni) član stanovskega restavratorskega društva, Slovenskega konservatorskega društva, ICOM in IIC. Dobivam publikacije teh asociacij, jih pogledam, kaj preberem in jih zadnje čase podarjam mladim bodočim kolegicam in kolegom na ALUO. Naj ponovim, da mi je žal, da je usahnil Bilten restavratorskega centra, ki bi mogel imeti povezovalno vlogo znotraj restavratorske stroke na Slovenskem in ne le v Restavratorskem centru kot na začetku.
Ne nazadnje sem za svoje dolgoletno delo prejel med drugim jugoslovansko plaketo z diplomo, ob dveh priznanjih pa še Steletovo nagrado za življenjsko delo. Za uspešno delo pri ohranjanju kulturne dediščine sem bil počaščen tudi z nazivom častni občan Občine Brežice. Naše delo je zanimivo, pestro, zahtevno in naporno. A je hkrati tudi lepo in izpolnjujoče.

»Portret Marijana Kolariča, ki je bil direktor v času mojega prihoda v zavod in me je tudi »inavguriral« za vodjo oddelka (1973–1979).«

Dušan Štepec, Saša Roškar

Poročilo in sprejeti zaključki okrogle mize z naslovom *O etnologiji v konservatorstvu ter o njeni vlogi pri varovanju in ohranjanju kulturne dediščine v 21. stoletju – izkušnje, vloga, izzivi*

UDK
39:7.025.3«20«(047)
719:39«20«(047)

Kratek uvod

V Sloveniji smo leta 2008 sprejeli nov Zakon o varstvu kulturne dediščine, po ocenah pripravljavcev enega od najsodobnejših v Evropi. V istem letu je Vlada Republike Slovenije sprejela tudi Sklep o ustanovitvi Javnega zavoda Republike Slovenije za varstvo kulturne dediščine, s katerim je temeljito spremenila dotedanji način dela in organiziranost varstvene službe. Ta je takrat še temeljila na regionalnem principu, saj centralizacija službe, ki se je začela leta 1999 z razdelitvijo do tedaj enotne službe za varstvo naravne in kulturne dediščine na službo za varstvo kulturne dediščine in službo za varstvo narave, še ni bila v celoti izvedena. Med reorganizacijo službe je nastala priložnost, da bi konservatorska stroka na novo definirala vlogo in pomen matičnih ved v varstveni službi. Na podlagi novih znanj, ki so jih prispevale posamezne znanstvene vede, se je družbeni pomen dediščine v zadnjih dvajsetih letih oziroma po letu 2008, ko je bil sprejet aktualni Zakon o varstvu kulturne dediščine, precej spremenil. V delovni skupini etnologov konservatorjev, ki deluje pri Zavodu za varstvo kulturne dediščine Slovenije, že dalj časa ugotavljamo, da nova spoznanja na področju preučevanja dediščine in procesov njenega nastajanja niso dovolj dobro vključena v konservatorsko prakso. Koliko se sploh v konservatorstvu zavedamo potrebe po celostnem pristopu k poznavanju in preučevanju dediščine? Ali je interdisciplinarnost, ki je pogoj za celostno obravnavo dediščine, dovolj prisotna v konservatorstvu? Če je, zakaj potem v konservatorski praksi še vedno velja tradicionalna delitev dediščine po posameznih matičnih »vrtičkih«? To je le nekaj vprašanj, ki si jih zastavljamo v omenjeni delovni skupini, ko govorimo o aktualnem stanju v konservatorstvu.

Zadnje dvajsetletno obdobje se nam zdi tudi primeren čas, da kritično ovrednotimo položaj etnologije v konservatorski službi, kjer nastopa kot ena od matičnih ved. Vsekakor je to tudi čas, da kritično ovrednotimo prispevek etnologije k razvoju konservatorske stroke na Slovenskem. Kaj etnologija prinaša v raziskovanje stavbarstva na Slovenskem in kaj k razvoju konservatorske stroke? Po čem se razlikuje etnološki pristop v konservatorstvu od pristopov drugih matičnih ved? Torej, kje smo in kam gremo s konservatorstvom v Sloveniji nasploh? Občutek je, da v Sloveniji nimamo povsem jasne vizije razvoja konservatorstva. Posledično izgubljamo tudi celovit pogled na vlogo in pomen posameznih matičnih ved pri tem.

Da bi poskušali najti odgovore na nekatera od omenjenih vprašanj, dilem in izzivov, smo skupaj s Slovenskim etnološkim društvom in Slovenskim etnografskim muzejem organizirali okroglo mizo z naslovom O etnologiji v konservatorstvu ter o njeni vlogi pri varovanju in ohranjanju kulturne dediščine v 21. stoletju – izkušnje, vloga, izzivi. Okrogla miza je bila organizirana 11. junija 2019 v dvorani upravne stavbe Slovenskega etnografskega muzeja, na Metelkovi ulici v Ljubljani. Udeležilo se je je 44 udeležencev iz različnih strokovnih, raziskovalnih, kulturnih in pedagoških institucij ter z Ministrstva za kulturo, vabljeni gostje **Marinka Dražumerič**, konservatorska svetnica, Zavod za varstvo kulturne dediščine Slovenije, OE Novo mesto, **Alenka Černelič Krošelj**, direktorica Posavskega muzeja Brežice in predsednica Slovenskega etnološkega društva, **Silvester Gaberšček**, vodja Sektorja za nepremično kulturno dediščino, Ministrstvo za kulturo Republike Slovenije, **Špela Ledinek Lozej**, znanstvena sodelavka, Inštitut za slovensko narodopisje, ZRC SAZU, **Sanja Lončar**, Oddelek za etnologijo in kulturno antropologijo, Filozofska fakulteta Sveučilišta v Zagrebu, **Robert Peskar**, generalni konservator, Zavod za varstvo kulturne dediščine Slovenije, **Jaka Repič**, predstojnik Oddelka za etnologijo in kulturno antropologijo Filozofske fakultete Univerze v Ljubljani, in **Gorazd Živkovič**, deželni konservator, vodja deželnega spomeniškega urada za Koroško, so spregovorili o izkušnjah, vlogi in izzivih etnologije v konservatorstvu v 21. stoletju.[1]

Vsebinska izhodišča za okroglo mizo so se dotaknila štirih vsebinskih sklopov, in sicer:
- pomanjkanja temeljnih raziskav stavbarstva,
- pomanjkanja kadrovskih in strokovnih standardov v konservatorski službi,
- izobraževanja na področju razvoja stavbarstva in etnološkega konservatorstva ter
- sodelovanja med konservatorji in kustosi pri varovanju in ohranjanju premične, nepremične in nesnovne dediščine.

Izhodišča sta pripravila **Saša Roškar** in **Dušan Štepec**, oba z Zavoda za varstvo kulturne dediščine Slovenije. Omenjena konservatorja sta okroglo mizo tudi vodila.

Povzetek okrogle mize

Voditelja okrogle miza sta za uvod predvajala odlomek iz dokumentarnega filma Izola – fragmenti (1979–1984)[2], v katerem je konservator Ivan Sedej govoril o tem, kaj je delo etnologov pri prenovah starih mestnih jeder. Za začetek pogovora v prvem programskem sklopu sta voditelja konservatorki Marinki Dražumerič zastavila vprašanje, koliko od tega, kar je bilo izrečenega v filmu, se je v zadnjih štiridesetih letih izpolnilo in kaj ne.

Marinka Dražumerič je ugotavljala, da se je v zadnjih štiridesetih letih marsikaj spremenilo. Spominjala se je, da je bila še kot študentka etnologije konec sedemdesetih let 20. stoletja vključena v prenovo starih mestnih jeder. Takrat je etnologija doživljala velik razcvet. Izola je bila eden prvih primerov tovrstnih prenov in vzorec za raziskovanje mestnih jeder. Takrat so bila postavljena zelo dobra izhodišča za etnološko raziskovanje urbanih središč, kar je sovpadalo s konservatorskimi prizadevanji za fizično prenovo pomembnih mestnih jeder na Slovenskem, ki jih je vodil arhitekt in konservator Peter Fister. Arhitekti so pri načrtovanju prenove potrebovali tudi podatke o tem, kakšno je bilo življenje v mestnih jedrih in kako omogočiti kontinuiteto življenja v njih po prenovi. Terenske raziskave so izvajali študentje arhitekture, etnologije in sociologije. Na žalost se tovrstne raziskave v urbanih okoljih niso več razvijale, saj v osemdesetih in devetdesetih letih 20. stoletja celovitih prenov mestnih jeder ni bilo več. Zaradi tega so se etnologi bolj usmerili v raziskovanje kmečkega podeželja. V ospredju njihovega zanimanja so bili bolj vasi, trgi in manjša mesta. Marinka Dražumerič se je kot mlada konservatorka najprej srečala s problematiko varstva dediščine v mestnem okolju leta 1981 z raziskavo načina življenja na Bregu[3] v Novem mestu, kar je bilo v skladu s takratnimi usmeritvami etnologije. Razlog za raziskavo je bila želja, da bi te hiše porušili, vendar je takrat novoustanovljeni Zavod za družbeno planiranje Novo mesto, v okviru katerega je delovala tudi območna enota za varstvo naravne in kulturne dediščine, vzel anonimno arhitekturo tega dela Novega mesta v bran. Pozneje, zlasti po letu 1999, se je po mnenju Marinke Dražumerič število del in nalog, ki jih opravlja konservator, bistveno razširilo. Konservatorjevo delo je po njenem postalo širše in bolj raznovrstno, kot pa je bilo v Sedejevem času. S tega vidika je Sedejev govor o sodelovanju konservatorjev pri prenovah mestnih jeder v dokumentarnem filmu ocenila danes kot zelo idealističen, vsekakor pa je bil za tisti čas zelo realen.

Na dodatno vprašanje voditeljev okrogle mize o tem, ali potrebujemo temeljne raziskave o stavbarstvu na Slovenskem, in če jih, zakaj, je Marinka Dražumerič še pojasnila, da etnologija ni edina stroka, ki nima opravljenih tovrstnih temeljnih raziskav. Po njenem mnenju so v konservatorstvu vsekakor topografije spomeniškega stavbnega fonda nujno potrebne. Konservatorska služba bi to morala delati, vendar za to ni ne časa in ne energije. Marinka Dražumerič ugotavlja, da so etnologi konservatorji naredili zelo malo temeljnih raziskav stavbarstva. Več so jih naredili etnologi iz drugih institucij, npr. Tone Cevc, Vito Hazler in posamezni kustosi po muzejih. Omenila je še, da je bila v sedemdesetih letih 20. stoletja izdelana Faza A[4], pri kateri je etnologijo pokril Ivan Sedej. To je bil zadnji sistematičen pregled stavbnega fonda, žal se podobni pregledi spomeniškega fonda niso več nadaljevali.

Špela Ledinek Lozej je k razmišljanju kolegice konservatorke podala pogled na področje raziskovanja stavbarstva z vidika raziskovalne institucije, iz katere prihaja. Pojasnila je, da bi se moral njen inštitut načeloma s področjem stav-

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1 Okrogla miza je bila zvočno posneta. Zvočni zapis hrani Zavod za varstvo kulturne dediščine Slovenije, OE Novo mesto, v dokumentaciji, ki je povezana z organizacijo in izvedbo okrogle mize.

2 Izola – Fragmenti (1979–1984) 1984, Izola. Center za etnološki film pri Goriškem muzeju, Medobčinski zavod za spomeniško varstvo Piran. S8, barvni, zvočni, 23 min. Strokovno vodstvo Zvona Ciglič in Zora Žagar, scenarij, kamera, montaža in režija Naško Križnar.

3 Breg je strnjen stavbni niz skromnih hiš na južnem robu novomeškega starega mestnega jedra, ki se na kamnitih pečinah slikovito dviga nad levim bregom reke Krke. Marinka Dražumerič je izsledke raziskave omenjenega novomeškega predela objavila leta 1988 v 36. številki Kronike pod naslovom *Življenje na novomeškem Bregu*.

4 Faza A so spomeniške karte in seznami zavarovanih kulturnih in naravnih spomenikov ter območij, pripravljene po posameznih občinah, ki jih je pripravil Ljubljanski regionalni zavod za spomeniško varstvo leta 1972.

barstva bolj ukvarjati. Vendar se vedno zatakne pri človeških in finančnih virih. Inštitut izvaja programe in projekte, ki se financirajo iz različnih virov. Ti viri mu omogočajo delovanje in obstoj, zato je njegovo sodelovanje v projektih nujno. Posledica tega je, da se na določenih raziskovalnih temah ne da delati kontinuirano več let skupaj. Iz tega razloga je zelo težko neko raziskovalno temo načrtno zastaviti in jo potem postopoma sistematično raziskovati. Špela Ledinek Lozej je opozorila, da je treba razlikovati med temeljnimi raziskavami stanovanjske in bivalne kulture, rabe prostora na eni strani ter na drugi strani aplikativnimi raziskavami, ki imajo rezultat v katalogih, topografijah, preglednicah itd. Po njenem mnenju gre tu za dva različna načina raziskovanja. Za razliko od aplikativnih raziskav zanimajo raziskovalca pri temeljnih raziskavah posebnosti, deviacije oz. tisto, kar odpira neke nove raziskovalne vidike. Na primeru svoje raziskave stanovanjske kulture v Vipavski dolini[5] je pojasnila, da je bila ta raziskava opravljena v okviru doktorske disertacije pod mentorstvom profesorja Vita Hazlerja in se po njenem ne more primerjati z aplikativnimi raziskavami, ki jih je v nadaljevanju opravljala na inštitutu. Omejitvi pri nadaljnjem raziskovanju na inštitutu sta čas in financer, ki določata kratek časovni plan za izvedbo in aplikativni fokus raziskave. Na srečo pa je bilo na inštitutu v preteklosti vendarle opravljenih precej temeljnih raziskav. Špela Ledinek Lozej je omenila Toneta Cevca, ki je posegel na zelo različna področja stavbarstva, npr. v stavbarstvo v Karavankah, kozolce, začasna bivališča in zavetišča na Veliki planini.

Jaka Repič je na vprašanje voditeljev okrogle mize, ali ima Oddelek za etnologijo in kulturno antropologijo interes za temeljne raziskave stavbarstva in kolikšen je ta interes, odgovoril, da je tega interesa veliko. Vsekakor tudi sam vidi potrebo po teh raziskavah. Bi pa po njegovem morali ločevati raziskave, ki jih lahko opravi oddelek sam, od tistih, ki jih opravljajo študentje v okviru diplomskih, magistrskih in doktorskih del. Oddelek je doslej izvajal tovrstne raziskave le v tolikšni meri, kolikor je za to imel interes posamezni profesor, kot na primer kolega Vito Hazler, ki te raziskave še vedno izvaja in razvija. Repič hkrati ugotavlja, da so tovrstne raziskave vključene tudi v raziskovalni program Slovenska identiteta v evropskem in svetovnem kontekstu; seveda je tema stavbarstva tu zastopana v manjši meri, pa vendarle. Po drugi strani pa so raziskave njegovega oddelka razširjene tudi na področja, ki so del konservatorstva in presegajo zgolj t. i. ljudsko stavbarstvo, in sicer s temami stavbarstva v urbanih območjih. Tudi tu je bil zelo dejaven kolega Vito Hazler. Oddelčne raziskave se širijo potem tudi na krajino in prostor, seveda pa pri tem ne gre za aplikativne raziskave, ki bi bile namenjene konservatorstvu in bi bile uporabne za strokovno delo konservatorjev. Za aplikativne raziskave so možnosti pri skupnih raziskovalnih projektih ali v okviru posamezne doktorske raziskave, kjer bi doktorski kandidati prišli iz prakse oziroma iz konservatorskih vrst in bi v procesu doktorskega študija nadgradili svoje znanje. Oddelek trenutno nudi predvsem možnost za razvoj teoretskih vprašanj in metodologije. Repič ugotavlja, da etnološka in kulturno-antropološka metodologija v zadnjih desetletjih sledi temu, kar so delali v Izoli že pred 40 leti. Gre torej v smer participativnosti, torej da obravnavamo dediščino kot širšo kategorijo in ne zgolj kot materialno dediščino, o kateri sme arbitrarno odločati le institucionalno varstvo. Torej ne z avtoritativnim pristopom določanja, kaj je dediščina za strokovnjaka, ampak v smislu razvoja dediščine s pomočjo lokalnih skupnosti, deležnikov na lokalni ravni in z ljudmi, ki živijo s to dediščino. S tem vidikom dediščine se oddelek zelo veliko in intenzivno ukvarja, zlasti na področju muzeologije, tudi ekomuzejev, potem raziskav rudarskih delavskih kolonij in podobno. Tovrstnih raziskav je na oddelku resnično precej. Repič je v nadaljevanju še enkrat potrdil, da ima njegov oddelek v okviru svojih zmožnosti še naprej interes opravljati temeljne raziskave stavbarstva, predvsem interdisciplinarne.

Sanja Lončar je predstavila izkušnje iz Hrvaške oziroma je razložila, kaj trenutno počnejo etnologi in kulturni antropologi na tem področju na Hrvaškem. Na fakultetah v Zagrebu in Zadru ter na Institutu za istraživanje i humanistiku v Zagrebu po njenem vedenju ni posebnega interesa za raziskovanje stavbarstva, nekaj več zanimanja je za področje urbane etnologije. V okviru slednje je pred leti v Zagrebu potekal večji raziskovalni projekt, v katerem so obravnavali širše kulturološke procese v mestu. Pomanjkanje tovrstnih temeljnih raziskav Sanja Lončar pogreša tudi za podeželje, kjer lahko govorimo bolj o raziskavah vasi in manjših naselij. Trenutno je na Filozofski fakulteti v Zagrebu ona edina, ki se ukvarja s tovrstnimi raziskavami. Na Oddelku za etnologijo in antropologijo na Filozofski fakulteti v Zadru se kolega Mario Katić ukvarja bolj s krajino kot pa z arhitekturo. Na Institutu za etnologijo i folkloristiko v Zagrebu pa se s tem področjem nihče več ne ukvarja; zadnja je bila Aleksandra Muraj. Sanja Lončar je povedala, da ima veliko izkušenj z raziskavami stavbarstva na Hrvaškem. Izkušnje ima tudi na področju konservatorstva, saj je nekaj časa delala kot konservatorka na enem od hrvaških konservatorskih oddelkov, danes pa z njimi redno sodeluje. Na terenu raziskuje skupaj s študenti, s katerimi izdeluje temeljne evidence in dokumentacijo. Srečuje se s podobnimi težavami, kakršne je omenila že njena predgovornica Špela Ledinek Lozej, tj. z zagotavljanjem kontinuiranega raziskovanja ene teme in zagotavljanjem finančnih sredstev za to. Raziskave, ki jih je omenila, izvaja s financiranjem lokalnih skupnosti in ne s sredstvi resornega ministrstva ali fakultete. K raziskavam poskuša pritegniti tudi študente arhitekture, saj zagovarja interdisciplinarni raziskovalni pristop. Na žalost že nekaj let zaman prosi profesorje s Fakultete za arhitekturo, naj se ji pri raziskavah pridružijo s svojimi študenti. Od ostalih raziskovalcev stavbarstva je omenila še umetnostne zgodovinarje in posamezne arhitekte. Na Hrvaškem je več Oddelkov za umetnostno zgodovino, kjer izvajajo in razvijajo različne raziskave, vendar ne takšnih, ki bi bile zanimive za etnologe in kulturne antropologe. Sanja Lončar ugotavlja, da etnologi konservatorji na Hrvaškem nimajo časa za raziskovanje. To vedno pride na vrsto šele po koncu nekih rednih konservatorskih nalog.

Gorazd Živkovič je predstavil izkušnje iz Avstrije. Omenil je, da je v Avstriji stanje nekoliko drugačno. Zaradi njihove zakonodaje, ki ureja področje varstva kulturne dediščine, je etnologija iz konservatorske službe izpuščena. V njej ni zaposlenih etnologov. Ti so zaposleni v muzejih, npr. v muzejih na prostem, ki jih je v Avstriji veliko. Vsaka dežela ima svoj muzej na prostem, je pa za te muzeje značilno, da so se v zadnjem obdobju znašli v finančnih težavah, saj se je obisk v njih zmanjšal. Zelo pozitivno pa je, da so stavbe, ki so vanje prenesene, zelo dobro raziskane, raziskave pa so tudi objavljene. Dendrokronološka raziskovanja, ki so se v muzeju na prostem pri Gospe Sveti začela pred nekaj leti, so odkrila, da je ena od stavb v osnovi celo iz leta 1469 in je najstarejša stavba na Koroškem. Gorazd Živkovič je konservatorsko kariero začel leta 1995 v Spodnji Avstriji, kjer je največji deželni oddelek za spomeniško varstvo. Tam ni bilo zaposlenega etnologa. Etnolog je bil zaposlen na deželnem spomeniškem uradu za Koroško, kamor je Živkovič prišel delat po letu 2012. Žal se etnologu med umetnostnimi zgodovinarji ni uspelo dovolj uveljaviti, poleg tega pa njegovo delovno mesto ni bilo dobro organizirano. Živkovič ugotavlja, da je bila v Avstriji dolgo časa v ospredju predvsem povojna obnova cerkva in skrb zanje. Danes ima vsaka avstrijska škofija svoj gradbeni oddelek, ki skrbi za posege na cerkvah in drugih objektih, ki so v lasti Cerkve. Krčenje števila kristjanov in s tem tudi dohodkov iz cerkvenega davka pa je privedlo do tega, da na primer Graška škofija oskrbuje samo župnijske cerkve in pripadajoča župnišča, nad podružnicami, med katerimi so številne opuščene, pa bdijo župnije. Ti cerkveni gradbeni oddelki so dobro povezani s konservatorsko službo. Sodelovanje je intenzivno. Soočanje z anonimno arhitekturo na podeželju pa je zaradi že omenjenega po Živkovičevem mnenju zelo težko, saj je povezano z lastniki kmetij, ki navadno nimajo posebnega razumevanja za varovanje in ohranjanje kulturne dediščine. Živkovič je kot zanimivost povedal, da imajo zelo velik interes za ohranjanje nesnovne dediščine zlasti koroški Slovenci, za varovanje in ohranjanje nepremične kulturne dediščine pa so manj zainteresirani. Živkovič je omenil tudi, da v Avstriji še izdajajo topografije spomeniškega fonda, vendar se vse več izdajajo predvsem poljudnoznanstvene publikacije. Konservatorji v vsakdanji praksi uporabljajo bolj raziskave znanstvenikov iz muzejev. To še posebej velja za avstrijsko Koroško, kjer sta temeljno delo opravila Tone Cevc in Ignac Primožič, ki sta leta 1991 izdala knjigo o kmečki arhitekturi na južnem Koroškem. Živkovič je omenil še Petra in Majdo Fister, ki sta že pred tem izdala knjigo o arhitekturi Zilje, Podjune in Roža. S to literaturo si konservatorji pomagajo še danes.

Alenka Černelič Krošelj je prvi tematski sklop zaključila še z muzejskim pogledom na raziskovanje stavbarstva. Najprej je omenila, da imajo muzeji nekoliko drugačen okvir delovanja kot konservatorska služba, ki jo za delo na terenu zavezuje zakon, poleg tega ima njihovo delo tudi določene pravne učinke. Za razliko od konservatorske službe se v muzejih ukvarjajo predvsem s programskimi vsebinami in muzejskimi postavitvami, ki jih nenehno prilagajajo ter po potrebi spreminjajo in dopolnjujejo. Delo v muzejih je zelo intenzivno. Muzeji se morajo ves čas sproti odzivati na dogajanje v okolju, zato se težko lotevajo kakšnih daljših raziskovalnih projektov, kar se Alenki Černelič Krošelj seveda ne zdi prav. Pri takšnih raziskavah, če že pride do njih, zagovarja interdisciplinarnost, vključevanje različnih strokovnjakov, delo z ljudmi in za njih. Okrogle mize, kot je bila ta, vidi kot priložnost za medinstitucionalno povezovanje s ciljem iskanja in oblikovanja strategije ukvarjanja s kulturno dediščino.

Po končanem prvem sklopu je razpravo začel **Vito Hazler**, ki je poudaril, da so po njegovih izkušnjah raziskave odvisne od ljudi, ki delajo v institucijah. Sam je na primer v svojih konservatorskih časih zelo veliko raziskoval skupaj s kolegom Jožetom Hudalesom, ki je takrat delal kot kustos v velenjskem muzeju. Ni pa mogel sodelovati s številnimi drugimi kolegi kustosi po drugih muzejih, saj mnogi med njimi niso čutili teh potreb. Hazler je v svoji dolgoletni raziskovalni praksi imel kar nekaj negativnih izkušenj s kustosi v muzejih, ki se najpogosteje izgovarjajo na pomanjkanje časa za sodelovanje. A ima tudi dobre izkušnje. Iz konservatorske prakse se spominja sodelovanja med kolegi konservatorji iz celjskega zavoda. Imel je srečo, da je lahko delal v kolektivu, v katerem so zaposlenim dopuščali svobodo. Nekaj sodelavcev se je uprlo klasičnemu konservatorskemu birokratskemu delu. Želeli so delati nekaj več, se ukvarjati s stroko. Tako so se celovito lotili Logarske doline, kjer so do takrat zadeve reševali parcialno oziroma točkovno od primera do primera glede na prispele vloge za izdajo soglasja. Hazler in njegovi sodelavci so tudi med vikendi izdelovali študijo o Logarski dolini, analizo njenih vrednosti, ki je kasneje postala podlaga za ustanovitev krajinskega parka. S tem projektom so na svojo stran pridobili domačine. To izjemno študijo so v Celju lahko naredili samo zato, ker so se kolegi med seboj dobro razumeli. Hazler ocenjuje, da so to raziskavo lahko naredili tudi zato, ker jim je uspelo izstopiti iz ozkih službenih okvirjev. V nadaljevanju je dodal še nekaj izkušenj iz raziskovanja v okviru predmetov stavbarstva in konservatorstva, ki ju je predaval na Oddelku za etnologijo in kulturno antropologijo. Ugotavlja, da so se študentje radi udeleževali raziskav in dela na terenu in so bili zelo odzivni. Tudi uporabnost njihovih diplomskih in magistrskih del je bila po njegovi oceni na zelo visoki ravni. Na raziskovalnih delavnicah, ki jih je organiziral Oddelek za študente, so ugotovili, da so

5 Špela Ledinek Lozej: Stanovanjska kultura v Vipavski dolini: etnološki vidiki razvoja in pomena kuhinje v 20. stoletju, doktorska disertacija, 2011.

usmeritve predmeta pravilne. Seveda pa se je izkazalo tudi, da tovrstnih raziskav ni mogoče opravljati brez sodelovanja konservatorske službe. Hazler je opozoril na pomanjkljivo raziskovanje stavbne dediščine, zlasti je bil kritičen do parcialnih raziskav, npr. pri raziskavah fevdalnih posestev, kjer na primer umetnostni zgodovinarji obravnavajo le del grajskih stavb, ne pa vseh. Sam je ravno z raziskavami grajske arhitekture dokazal potrebo po vključevanju etnologov.

Voditelja okrogle mize sta po Hazlerjevi razpravi odprla drugi tematski sklop, katerega izhodišče je bila problematika pomanjkanja kadrovskih in strokovnih standardov v konservatorski službi. Marinki Dražumerič sta zastavila vprašanje, kako ji kot konservatorki uspe združevati znanja in metode umetnostne zgodovine in etnologije pri njenem konservatorskem delu. Koliko po njenem mnenju v konservatorstvu znamo, zmoremo in hočemo upoštevati tudi metode dela drugih ved? Ali nam obstoječa konservatorska praksa, organiziranost službe in usposabljanje to sploh omogočajo?

Marinka Dražumerič je uvodoma najprej predstavila nastanek novomeške območne enote za varstvo kulturne dediščine, katere začetek sega v leto 1980. To je približno dvajset let za drugimi zavodi po Sloveniji. Območna enota se je najprej imenovala Zavod za varstvo naravne in kulturne dediščine Novo mesto. Poleg naravovarstvenikov so bili v tem zavodu zaposleni še geograf, arhitekt, etnolog, geologinja in umetnostna zgodovinarka. Prvih deset let so delali vsi vse, saj so začeli praktično iz nič. Skupaj so hodili na teren, skupaj delali in sodelovali. Takrat je bilo povsem samoumevno, da je šel z njo na teren arheolog oziroma da je šla ona kot umetnostna zgodovinarka in etnologinja na teren z arheologom. Povsem samoumevno je bilo, da sta ona in zgodovinar skupaj z arheologom izkopavala arheološko najdišče v Beli Cerkvi. V začetnem obdobju je bilo konservatorjevo delo povsem prepleteno z delom njegovih kolegov. Vsi so pomagali vsem, zato da se je program lahko izvedel do konca. Sodelovanje med kolegi in strokami so zahtevali tudi sami kulturni spomeniki, najzahtevnejša med njimi npr. samostan Pleterje in gotska cerkev v Šentrupertu na Dolenjskem, saj so takrat novomeški konservatorji imeli še zelo malo izkušenj. Z leti se je zavod okrepil z novimi kadri z bolj specifično izobrazbo. Konservatorsko delo je postalo manj povezovalno, saj je bilo bolj strukturirano. Poleg tega so se posamezniki specializirali za posamezne zvrsti oziroma segmente dediščine. Po oceni Marinke Dražumerič je v konservatorski službi danes še vedno veliko sodelovanja. Gre namreč za eno redkih javnih služb, v kateri so zaposleni zelo različni profili z različno izobrazbo, kar je seveda velika prednost za strokovno delo. Na žalost pa je tudi res, da je sodelovanje vse preveč odvisno od osebnostnih lastnosti posameznika. Nekomu je neki kolega simpatičen, drugemu ne.

V nadaljevanju sta voditelja izzvala generalnega konservatorja z vprašanjem o tem, kako je s strokovnimi standardi v konservatorski službi. Ena od nalog generalnega konservatorja je namreč tudi priprava enotne metodologije strokovnega dela, ki naj bi zagotavljala poenoteno delo konservatorjev. Zastavila sta mu tudi vprašanje, kako konservatorska služba konservatorju zagotavlja strokovno integriteto oziroma njegovo strokovno avtonomijo.

Robert Peskar je pojasnil, da je Zavod za varstvo kulturne dediščine Slovenije v preteklosti poskušal poenotiti delo konservatorjev na različne načine; omenil je stara navodila za izvajanje strokovnega dela, ustanavljanje in delovanje različnih komisij, različna izobraževanja, delavnice, delovne skupine (slednje so aktualne še danes). Poskusov in pristopov je bilo po njegovem mnenju že zelo veliko. Vsekakor je bilo po letu 2000, ko se je začela centralizacija zavoda, narejenih kar nekaj premikov k poenotenju dela, vendar pa še ne do te stopnje, da bi bili lahko zadovoljni. Peskar je omenil, da imajo ponekod v Evropi strokovne standarde urejene. Izpostavil je avstrijsko konservatorsko službo. Ta je pred leti opravila obsežno delo in pripravila tehnične standarde za delo v konservatorski službi. Ti standardi so objavljeni. Seveda bi jih pri nas lahko enostavno samo prevedli, vendar je bilo ugotovljeno, da so za naš družbeni standard še prezahtevni. Peskar se je zato odločil, da standarde raje uvajamo postopoma, in sicer z internimi navodili. Leta 2016 so bila na zavodu sprejeta prva navodila, ki se dotikajo protokola o sprejemanju strokovnih odločitev, v pripravi so navodila številka dve, ki bodo obravnavala določitev konservatorskih in restavratorskih del po zahtevnosti. Sledila bodo navodila za izvajanje raziskav in preiskav na objektih kulturne dediščine. V teh navodilih bodo upoštevali tudi priporočila avstrijskih standardov. Peskar je opozoril, da je proceduro priprave novih navodil pred kratkim zmotilo Ministrstvo za kulturo z zahtevo po vzpostavitvi varstvenih območij dediščine, ki jih predvideva Zakon o varstvu kulturne dediščine iz leta 2008. Zavod je sedaj vpet v te aktivnosti, a bo tudi to posledično prispevalo k oblikovanju enih od navodil, in sicer navodil o merilih vrednotenja kulturne dediščine. Sicer pa zavod za naslednje leto načrtuje sprejetje navodil za dokumentiranje dediščine. V njih bodo poskušali implementirati nekatera spoznanja in priporočila nemške konservatorske službe, ki imajo tovrstne standarde dobro pripravljene. Generalni konservator vidi možnost za implementacijo strokovnih standardov v konservatorsko prakso predvsem v zakonodaji in podzakonskih aktih. Dokler to ne bo narejeno, so vsa navodila le priporočila in niso obvezna za strokovno delo. Vsekakor pa se po Peskarjevem prepričanju s postavitvijo strokovnih standardov zagotavlja tudi večja integriteta konservatorjevega dela. Poleg tega bodo standardi in normativi vplivali tudi na to, da bodo tudi manj motivirani lahko delali in opravili delo v skladu s strokovnimi standardi, kar doslej ni bilo pravilo. Poleg strokovnih standardov zagotavljajo integriteto konservatorjevega dela tudi predpisi, Peskar je izpostavil Zakon o upravnem postopku. Bolj problematično se mu zdi, če se konservatorji ne držijo predpisov, saj je potem zavod deležen pritožb strank. Prav zato je zavod prioritetno sprejel navodila številka ena, ki določajo postopek sprejemanja strokovnih odločitev in postopek, kako ravnati v primeru pritožb.

Voditelja sta k besedi povabila predstavnika Ministrstva za kulturo, Silvestra Gaberščka, in sicer z vprašanjem, zakaj zavod še nima strokovnih standardov, kdo je za to odgovoren in kako naj zavod pride do temeljnih konservatorskih publikacij, tj. konservatorskega terminološkega leksikona in temeljnega priročnika za delo v konservatorstvu.

Silvester Gaberščck je pojasnil, da je Ministrstvo za kulturo zelo zainteresirano, da se strokovni standardi čim prej pripravijo. Prizadevanja za njihovo izdelavo segajo še v čas bivše države, ko si je za to prizadeval Jože Humer[6], vendar do uresničitve ni prišlo, ker je bilo veliko odpora tudi na terenu. Prizadevanja so oživela po letu 1991, ko se je pojavila ideja, naj Ministrstvo za kulturo in zavod ustanovita posebno delovno komisijo, ki bo pripravila strokovne standarde. Žal do tega ni prišlo. Ker standardov v Gaberščkovih konservatorskih časih ni bilo, so se on in njegovi kolegi etnologi konservatorji ravnali po navodilih, ki so veljala za delo umetnostnih zgodovinarjev, oziroma so sledili Steletovi šoli in njegove standarde prilagajali za svoje potrebe. Glede pristojnosti Ministrstva za kulturo za uvedbo strokovnih standardov in izdajanje temeljnih konservatorskih publikacij pa je pojasnil, da ministrstvo ni tisto, ki bi usmerjalo konservatorsko službo, ji dajalo navodila, kako in kaj naj dela. V tem smislu je in mora biti konservatorska služba samostojna. Izdelava in sprejetje strokovnih standardov sta absolutno v domeni konservatorske službe in ne Ministrstva za kulturo. Prav tako to velja za izdajanje temeljne konservatorske literature. Lahko pa ministrstvo finančno podpre npr. določena prizadevanja konservatorske službe na tem področju, npr. pri izdaji osnovne konservatorske literature. Gaberščku se zdi pomembno, da bi konservatorska služba na primer pripravila etnološki konservatorski atlas, v katerem bi bilo evidentirano vse, kar se je na področju raziskav doslej že naredilo. Po njegovem bi potrebovali tudi konservatorski priročnik za delo z lastniki. Zelo dobro se namreč spominja svojih konservatorskih izkušenj z varovanjem na Veliki planini, kjer je na začetku svoje konservatorske kariere hodil kot nekakšen inšpektor in zelo hitro povzročal konfliktne situacije. Kasneje je zaradi sodelovanja z arhitektom Vlastom Kopačem spremenil način dela in odnosa do lastnikov dediščine, saj mu je sodelovanje z njim odprlo oči, da se življenje spreminja, mi vsi skupaj pa se mu moramo prilagajati.

Po Silvestru Gaberščku je koristnost strokovnih standardov v Avstriji razložil **Gorazd Živkovič**. Povedal je, da so v preteklosti njihovim konservatorjem očitali, da so na terenu delali različno, eni boljše, drugi slabše, zato so si v njihovi konservatorski službi zastavili cilj, da pripravijo strokovne standarde oziroma smernice za izvajanje strokovnega dela. S tem so želeli dvigniti raven strokovnega dela tudi pri slabših konservatorjih. Predvsem pa so strokovni standardi tudi psihološka opora konservatorjem, ki so na terenu izpostavljeni kritiki. Živkovič je omenil zakon iz leta 1999, ki je delo konservatorjev omejil izključno na kulturne spomenike. Okolica spomenikov in njihovo širše vplivno okolje je v domeni deželne zakonodaje in ne njihove konservatorske službe, ki je državna služba. To je po njegovem mnenju slabo, saj ima vsak spomenik svoje vplivno območje. Glede avstrijskih strokovnih standardov za konservatorsko delo pa je dodal, da so bili napisani in objavljeni pred nekaj leti. Projekt sta vodili dve njegovi kolegici z Oddelka za arhitekturo. Na projektu je intenzivno delala skupina osmih sodelavcev. Eden od teh je bil npr. kolega Walter Hauser, vodja njihovega konservatorskega oddelka na Tirolskem. Zakaj so po mnenju Živkoviča standardi sploh potrebni? Živkovič ugotavlja, da zato, ker se svet spreminja. Danes imamo na gradbenem področju opravka z vrsto določil glede zagotavljanja požarne in potresne varnosti ter drugimi določbami, ki zadevajo gradbenotehnične zahteve, ki jih je treba upoštevati tudi pri konservatorskem delu. V preteklosti so konservatorji reševali kulturni spomenik samo z upoštevanjem predpisov s področja varstva kulturne dediščine, danes pa ni več tako. Zato po Živkovičevem mnenju konservatorji potrebujejo standarde, da se lahko nanje oprejo pri svojem delu in pri komunikaciji z drugimi deležniki, ki sodelujejo pri obnovi. Zelo dobro se obnesejo standardi za gradbenozgodovinsko raziskovanje kulturnih spomenikov, ki jih avstrijski konservatorji uporabljajo, kadar predpisujejo zahteve za izdelavo dokumentacije. Strokovni standardi so poenotili njihovo delo. Standardi morajo biti napisani na kratko in jasno, le tako bodo uporabni v praksi. Po izkušnjah, ki jih ima spomeniško varstvo na Koroškem, pa standardi sami po sebi še ne bodo rešili kulturnih spomenikov, poleg njih je treba sprejeti še vrsto drugih ukrepov. Ko je Živkovič leta 2012 prišel na koroški konservatorski oddelek v Celovcu, si je zadal za cilj, da se posveti koroški anonimni arhitekturi, saj je to najbolj ogrožena zvrst kulturne dediščine na Koroškem. Zaradi nacionalnega vprašanja je bila dolgo ignorirana, zdaj ji posamezniki posvečajo vse več pozornosti. Kljub številnim kontaktom in dobrim odnosom na dvojezičnem območju pa je ozaveščanje še vedno zelo težavno. Velikega napredka v kratkem ni pričakovati, saj jim doslej še ni uspelo preusmeriti pozornosti občin na tovrstno stavbno dediščino. V občinah Železna Kapla in Sele so v devetdesetih letih 20. stoletja našteli skupaj približno trideset domačij z bolj ali manj ohranjeno avtentičnostjo. Pri valorizaciji dediščine jim je v omenjenih občinah v zadnjem obdobju uspelo za kulturni spomenik ovrednotiti le še dve domačiji: Smrtnikovo domačijo v Občini Železna Kapla in Krištanovo domačijo v Občini Sele.

Po predstavitvi avstrijskih izkušenj z vključevanjem stro-

6 Jože Humer je avtor dela z naslovom *Naravna in kulturna dediščina in njeno varovanje v Sloveniji: gradivo Republiškega Komiteja za kulturo* iz leta 1989.

kovnih standardov v konservatorsko službo sta voditelja okrogle mize odprla razpravo, v katero se je vključil **Vito Hazler**. Generalnega konservatorja je vprašal, kakšna merila vrednotenja naj bi konservatorska služba določila. Bodo ta univerzalna in ali se razmišlja kaj tudi o tem, da bi merila oblikovale posamezne stroke in na ta način prispevale nekaj svojega v zakladnico konservatorske službe?
Robert Peskar je pojasnil, da je konservatorska služba za potrebe izdelovanja varstvenih območij dediščine imenovala delovno skupino, ki pripravlja merila vrednotenja. Omenjena skupina je pripravila širši nabor meril, nekatera od njih so že stara, dodanih pa je nekaj novih. Cilj je, da se odločimo za takšen nabor meril, s katerim bomo po vzoru Unescovih meril za uvrščanje dediščine na svetovni seznam kulturne dediščine lahko določili univerzalno vrednost dediščine. Pomembno je, da je sistem vrednotenja postavljen tako, da bi v merilih upoštevali tudi vse specifike matičnih ved.
Tretji vsebinski sklop okrogle mize je bil posvečen problematiki izobraževanja konservatorjev. Z udeleženci okrogle mize je svoje izkušnje najprej delila **Marinka Dražumerič**. Omenila je, da so možnosti izobraževanja iz konservatorstva relativno omejene, vendar so. Konservatorstvo se kot poseben predmet predava na fakulteti, npr. na Oddelku za umetnostno zgodovino in na Oddelku za etnologijo in kulturno antropologijo. Konservatorska služba organizira številna izobraževanja, tečaje, predavanja in strokovne ekskurzije. Znanje se v konservatorstvu po mnenju Marinke Dražumerič pridobiva vse življenje, od vsakega posameznika pa je odvisno, koliko ga bo pridobil. Vsekakor velja, da konservatorju ne uspe več poskrbeti za permanentno izobraževanje med rednim delovnim časom, saj mu za to zmanjkuje časa. Če želiš biti dobro seznanjen z novostmi, moraš nova znanja pridobivati tudi izven delovnega časa, zlasti to velja za prebiranje strokovne literature. Na bolj konkretno vprašanje voditeljev, ali obstoječi izobraževalni sistem na fakultetah in oblike permanentnega izobraževanja, ki jih izvaja ZVKDS, konservatorju začetniku omogočajo dovolj znanja, ko pridejo v konservatorsko službo, in ali konservator začetnik tudi razume in pozna metode dela ostalih matičnih ved, pa Marinka Dražumerič ni znala odgovoriti. Opisala je zgolj svojo izkušnjo, da se je v konservatorski službi zaposlila brez predhodnega posebnega znanja o konservatorstvu, saj takrat na Oddelku za etnologijo še ni bilo tovrstnega predmeta. Predavanja profesorja Petra Fistra so se takrat šele komaj dobro začela. Kot študentka se jih je udeleževala povsem prostovoljno. Drugače pa je bilo na Oddelku za umetnostno zgodovino, kjer so predavanja iz predmeta konservatorstva že potekala, vodil jih je profesor Sergij Vrišer, ki je poleg konservatorstva predaval še muzeologijo. Za njim je njeni generaciji študentov predaval konservator Milan Železnik iz ljubljanskega regionalnega zavoda za spomeniško varstvo. Marinka Dražumerič je opisala še izkušnjo iz svojega magisterija, ki ga je opravila na Oddelku za umetnostno zgodovino. Tema njenega magistrskega dela, v katerem je obravnavala zgodovinski pregled razvoja konservatorstva na Dolenjskem in v Beli krajini od njegovih začetkov do konca druge svetovne vojne[7], ni zanimala nikogar, ne službe ne fakultete.
Jaka Repič je poskušal odgovoriti na vprašanje voditeljev, ali jim na Oddelku za etnologijo in kulturno antropologijo uspe vključevati konservatorsko prakso v pedagoški proces, in če jim uspe, do katere mere. Pojasnil je, da je oddelek v procesu bolonjske prenove poskrbel za prenovo študijskih programov na vseh treh stopnjah, diplomski, magistrski in doktorski. Povsod so vključene tudi obvezne vsebine, ki se tičejo kulturne dediščine, razvoja stavbarstva, konservatorstva in muzeologije, kar pomeni, da diplomant njihovega oddelka ne more končati študija, ne da bi naredil izpit iz omenjenih predmetov. Repič je pri tem opozoril, da gre vendarle za študij etnologije in kulturne antropologije, in ne za študij etnološkega konservatorstva. Poleg tega je treba razumeti, da oddelek izvaja omenjene vsebine v okviru svojih razpoložljivih možnosti. Repič je še dodal, da sam razlikuje tri tipe znanja: tehnične veščine, ki jih oddelek ne ponuja, konservatorji pa jih lahko pridobijo šele med samim delom v konservatorski službi; poznavanje področja, ta znanja pridobivajo študentje pri predmetu Etnološko konservatorstvo na prvi stopnji in pri predmetu Sodobno konservatorstvo na drugi stopnji; tretji tip znanja pa je metodologija, torej način, kako pristopiti h konceptu dediščine in njeni produkciji. Na oddelku na primer zagovarjajo participativni pristop. Na tretji študijski stopnji pa oddelek ponuja možnosti za prijavo doktoratov s področja etnologije ter socialne in kulturne antropologije ali pa s področja heritologije. Največji prispevek, ki ga njegov oddelek lahko prispeva k razvoju konservatorstva, je, da ponudi znanje o etnološki metodologiji dela – pristop k obnovi z ljudmi in za ljudi. Repič je zaključil z oceno, da so na oddelku vedno zainteresirani za sodelovanje s konservatorji na terenu in v posameznih raziskovalnih projektih. Tovrstna sodelovanja s konservatorji ZVKDS potekajo v okviru vaj Etnološko konservatorstvo, ki jih zadnjih pet let izvaja Miha Kozorog.
Špela Ledinek Lozej je o izobraževalnih možnostih na Podiplomski šoli ZRC SAZU, kjer poteka podiplomski program v sedmih modulih[8], pojasnila, da sta področji stavbarstva in stanovanjske kulture vključeni samo v modul Slovenske študije – tradicija in sodobnost. Nosilka predmeta Poglavja iz materialne kulture Slovencev je Maja Godina Golja. Predmet tega modula so med drugim tudi stavbarstvo, dediščina in njeni procesi nastajanja. Po oceni Špele Ledinek Lozej ta študij ne more odgovarjati na vse izzive sodobnega konservatorstva, saj so tu potrebna številna druga znanja, npr. s tehničnega, gradbenega in arhitekturnega področja. Torej ta študij po njenem ne oblikuje konservatorja. Po njenem mnenju bi morali znanstvene raziskave izvajati kar konservatorji sami, saj imajo stik s terenom in stavbnim fondom. Ministrstvo za kulturo in zavod pa bi morala njihove znanstvene raziskave podpirati in konservatorje raziskovalce razbremeniti birokratskega dela. Špela Ledinek Lozej predlaga, da se v okviru zavoda po vzoru Centra za preventivno arheologijo ustanovi preventivni center za preučevanje stavbne dediščine.
Sanja Lončar je na kratko predstavila značilnosti izobraževalnega sistema na Hrvaškem. Pojasnila je, da so leta 2005 na Hrvaškem prešli na bolonjski izobraževalni sitem. Pred tem so vsi študentje etnologije, arheologije, umetnostne zgodovine, zgodovine in muzeologije poslušali obvezne seminarje, kot sta Uvod v muzeologijo in Uvod v varstvo in ohranjanje kulturne dediščine, ki ju je vodil profesor Ivo Maroević. Po letu 2005 pa je prišlo do določenih sprememb. Pedagoški procesi so se začeli osredotočati in izvajati samo znotraj lastnih matičnih ved. Na Oddelku za informacijske znanosti so uvedli predmet Upravljanje kulturne dediščine, na Oddelku za umetnostno zgodovino so na podiplomskem študiju uvedli konservatorsko smer. Oddelek za etnologijo in kulturno antropologijo je ostal brez obveznih konservatorskih vsebin. Edini študij na diplomski stopnji na Filozofski fakulteti v Zagrebu, ki vključuje obvezne vsebine iz konservatorstva, je študij na Oddelku za umetnostno zgodovino, kjer je vsebina usmerjena v zgodovinski prikaz konservatorske misli in vključuje seminar o premični in nepremični dediščini. Predmete predavajo arhitekt profesor Zlatko Jurič in dva profesorja umetnostne zgodovine. Na Oddelku za etnologijo in kulturno antropologijo se trenutno izvajata dva seminarja, in sicer o varstvu in ohranjanju kulturne dediščine in o nesnovni dediščini. Sanja Lončar je še dodala, da so na Hrvaškem trenutno sredi spreminjanja študijskih programov. Vsi novi študijski programi bodo morali biti končani do naslednjega leta. Želi si in upa, da jim bo na Oddelku za etnologijo in kulturno antropologijo uspelo v novi program vključiti več obveznih vsebin s področja varstva in ohranjanja kulturne dediščine. Omenila je, da se tudi na drugih fakultetah pojavljajo programi, ki vsebinsko pokrivajo temo dediščine. Tako se je na primer na Ekonomski fakulteti v Zagrebu pred kratkim akreditiral študijski program Upravljanje ustanov, ki se ukvarjajo z dediščino. Poudarila je, da zagovarja interdisciplinarne izobraževalne programe. Kot umetnostna zgodovinarka in etnologinja je dobre interdisciplinarne izkušnje pridobila v konservatorski službi, kjer je nekaj časa tudi delala, ter po opravljenem doktoratu še na specialističnem študiju v Angliji, na eni od tehničnih fakultet, kjer je pridobila dodatna znanja, ki se jih ne more pridobiti v zaprtem izobraževalnem sistemu posameznih znanstvenih disciplin.
Izkušnjo in informacijo o izobraževalnem sistemu v Avstriji je posredoval tudi **Gorazd Živkovič**. Pojasnil je, da v Avstriji obstaja samo študij restavratorstva, in sicer na dveh akademijah na Dunaju. Za področje konservatorstva v Avstriji ni študija. Nekaj vsebin iz konservatorstva imajo na fakultetah za arhitekturo in na oddelkih za umetnostno zgodovino. Tisti, ki želijo študirati področje varstva in ohranjanja kulturne dediščine, se na podiplomski študij odpravijo v Nemčijo, v Bamberg, Berlin ali Stuttgart.
Kakšno je stališče Zavoda za varstvo kulturne dediščine Slovenije do vključevanja konservatorjev v pedagoške procese, sta moderatorja v nadaljevanju preverila še pri generalnem konservatorju, ki ima izkušnje tudi kot predavatelj, docent na Oddelku za umetnostno zgodovino na Filozofski fakulteti v Ljubljani. R**obert Peskar** je najprej omenil, da pedagoški proces v okviru zavoda pokriva bolj področje promocije in populariziranja varstva kulturne dediščine, kjer ima zavod tudi najjasnejšo vizijo. Ta vključuje izobraževanje ne samo zaposlenih, temveč tudi vseh zunanjih zainteresiranih o kulturni dediščini na Slovenskem in njeni obnovi. Zavodska prizadevanja za zdaj ne gredo v smer, da bi načrtno vzgajali predavatelje, ki bi predavali konservatorstvo na univerzah, saj želijo dobre in perspektivne kadre zadržati na zavodu. Po drugi strani gre v Sloveniji za relativno majhno potrebo po kadrih, saj je vpisov študentov na družboslovje iz leta v leto manj. Peskar je opozoril, da so v preteklosti predavali na fakultetah številni eminentni profesorji, ki so prišli ravno iz vrst konservatorjev (npr. France Stele, Nace Šumi, Peter Fister, Vito Hazler ...). Poudaril je tudi, da v konservatorstvu nujno potrebujemo tudi akademsko sfero zaradi potreb po strokovnih avtoritetah, ki bi prispevale k reševanju najzahtevnejših konservatorskih vprašanj. Po Peskarjevem prepričanju zavod nujno potrebuje akademsko izobražen kader, saj je na tem področju trenutno še šibek. Med prizadevanji zavoda za pridobitev akademske izobrazbe pri konservatorjih je omenil še možnost, da zavod finančno podpre študij svojih zaposlenih, kar je v preteklosti že izvajal, v zadnjem času pa zaradi zakonskih omejitev ne več.
Na podvprašanje moderatorjev, ali bi lahko predaval konservatorstvo na svojem oddelku brez konservatorskih izkušenj, je generalni konservator jasno odgovoril, da ne.
Jaka Repič je dodal še svoje stališče k problematiki vključevanja konservatorjev v pedagoške procese na univerzah. Po njegovem zadeva ni enostavna. Izpostavil je, da mora predavatelj na univerzi imeti doktorat in izpolnjevati tudi pogoje za habilitacijo. Oboje se je izkazalo kot težava, ko so na Oddelku za etnologijo in kulturno antropologijo razmišljali o tem, kako nadaljevati Hazlerjevo delo po njegovi upokojitvi. Trenutno situacijo začasno rešujejo s kolegico Nežo Čebron Lipovec, ki pa je zaposlena na primorski univerzi. Kolegica predava na prvi stopnji. Na srečo še vedno lahko računajo tudi na kolega Hazlerja, ki predava na drugi stopnji. Na oddelku si želijo, da bi se kateri izmed konservatorjev specializiral z doktoratom in bi pri njih predaval na podlagi delne zaposlitve, ki bi bila urejena med zavodom in fakulteto. Težava je samo v tem, da ima oddelek trenutno odobrenih 12,5 delovnega mesta, več jih gotovo ne bo pridobil. Kadrovske omejitve torej so, vendar pa bi

7 Marinka Dražumerič: Zgodovina in razvoj konservatorstva: na Dolenjskem in v Beli krajini od njenih začetkov do leta 1945. Magistrsko delo. Filozofska fakulteta, Oddelek za umetnostno zgodovino, 2007.
8 Špela Ledinek Lozej je od jeseni 2019 na tem podiplomskem programu nosilka predmeta »Dediščina, dediščinski procesi in prakse«, pri katerem je poudarek na kritičnem razmisleku o dediščinskih procesih.

se za to področje gotovo še našla sprejemljiva rešitev. Repič je posebej izpostavil še, da je doktorski študij na Filozofski fakulteti od letošnjega leta ponovno sofinanciran, kar je zelo dobro, saj je polna cena doktorskega študija, ki znaša 10.600,00 EUR, izjemno velik strošek za prijavitelja.

Po Repiču sta moderatorja odprla diskusijo tudi med obiskovalci okrogle mize, h kateri se je najprej prijavila **Suzana Vešligaj** z mariborske območne enote Zavoda za varstvo kulturne dediščine Slovenije. Povedala je, da je imela srečo, da je bil njen profesor na Oddelku za etnologijo in kulturno antropologijo profesor Vito Hazler. Po njegovi zaslugi se je odločila, da bo konservatorka. Seveda na oddelku takrat ni pridobila vsega tega znanja, kot ga ima danes; pridobila ga je v praksi. Tudi v konservatorski službi je imela srečo z mentorico Jelko Skalicky, ki ji je na začetku konservatorske kariere veliko pomagala. Poudarila je, da mora vsak konservator računati tudi s tem, da bo delal napake in da se bo na njih tudi učil. Tudi sama je delala napake. V začetku več, kasneje pa vse manj, saj je spremljala delo svojih kolegov, se sproti izobraževala, sledila doktrini, smernicam in navodilom. Mnenja je, da se konservatorji lahko oblikujejo samo v konservatorski službi. Pohvalila je sodelovanje z Mihom Kozorogom z Oddelka za etnologijo in kulturno antropologijo, s katerim je pred kratkim sodelovala pri izvedbi ene od terenskih praks njegovih študentov. Pri tem sodelovanju se ji je potrdilo, da smo konservatorji ne le etnologi, temveč tudi arhitekti, obrtniki, administratorji, saj moramo obvladati celo vrsto najrazličnejših znanj. Imamo prednost, da pri svojem delu spoznavamo različne stroke in njihova znanja. Zaradi tega lahko konservatorji s svojim znanjem in izkušnjami obogatimo pedagoški proces. Praktične izkušnje konservatorjev so za pedagoški proces po njenem izjemnega pomena. To je navsezadnje dokazal tudi kolega Vito Hazler, ki je izobraževal študente na podlagi konservatorskih izkušenj. Zato se ji zdi zelo pomembno, da se konservatorji vključijo v pedagoške procese na fakulteti. Opozorila je, da je medinstitucionalnega sodelovanja premalo, zato bi bilo intenzivnejše sodelovanje med zavodom in posameznimi oddelki na Filozofski fakulteti zelo pomembno.

V diskusijo se je vključil še **Rajko Muršič**, redni profesor na Oddelku za etnologijo in kulturno antropologijo, ki je predstavil manj znano dejstvo, da je pred več kot desetimi leti njegov oddelek skupaj z oddelki za umetnostno zgodovino, arheologijo in zgodovino pripravil študijski program z naslovom Muzeologija in konservatorstvo. Na žalost tega programa Filozofski fakulteti ni uspelo akreditirati. Ker je bil Muršič sam takrat predstojnik Oddelka za etnologijo in kulturno antropologijo, se tega zelo dobro spominja. Akreditacija ni uspela iz finančnih razlogov. Filozofska fakulteta se je morala ob vstopu v bolonjski izobraževalni sistem zavezati, da s spreminjanjem študijskih programov ne bo povečala izobraževalnih stroškov. Edina alternativa je bila uvedba novega študijskega programa na račun ukinitve nekega obstoječega programa, kar pa seveda ni bilo izvedljivo. Muršič je pojasnil, da je bilo takrat med oddelki veliko dobre volje, da se pripravi interdisciplinarni program, vendar je bilo sodelovanje med oddelki izredno naporno. V omenjenem programu sta imela profesorja Jože Hudales in Vito Hazler predvidenih več dodatnih ur, s katerimi bi precej popestrila program na njegovem oddelku. Povedal je še, da je prepričan, da bi se danes pogovarjali o drugih stvareh, če bi omenjeni študijski program takrat zaživel. Dodal je še nekaj pomembnih podatkov iz zgodovine prizadevanj za vključitev muzeologije in konservatorstva na Oddelku za etnologijo in kulturno antropologijo. Že v petdesetih letih 20. stoletja se je na oddelku predaval predmet muzeologija, temu se je leta 1974 priključil še predmet konservatorstvo. Po letu 1980 je oddelek uvedel 60-urni predmet o etnološkem konservatorstvu. Po bolonjski prenovi šolskega sistema se je obseg ur povečal na 120 oziroma 180 pedagoških ur. Študentje na njegovem oddelku danes poslušajo dva- do trikrat več konservatorskih vsebin, kot so jih poslušali v osemdesetih letih 20. stoletja.

V razpravo se je vključil tudi **Jože Hudales**, izredni profesor na Oddelku za etnologijo in kulturno antropologijo. Pojasnil je, da so študijski program, ki ga je omenil kolega Muršič, pripravljali v letih 2005–2006. Predviden je bil specialistični študij muzeologije in konservatorstva, na oddelku ga je pripravljal ravno Hudales. Začetki prizadevanj za pripravo interdisciplinarnega študijskega programa pa po njegovem segajo že v drugo polovico devetdesetih let 20. stoletja, ko je pobudo zanj dal takratni predstojnik profesor Božidar Jezernik. Žal so takrat o tem programu veliko govorili, do njegove realizacije pa ni nikoli prišlo. Študijski program je Hudales kasneje sam vendarle pripravil na podlagi pregleda dobrih praks po Evropi. Vsa gradiva v zvezi s tem programom hrani pri sebi v arhivu. Od vseh prizadevanj je na koncu ostal študijski program Heritologija, ki je po njegovem kar velik uspeh Filozofske fakultete, čeprav je na začetku več obetal. Kasneje se je ta program izjalovil, saj so bili interesi posameznih oddelkov pri izvajanju programa neenakopravni. Izstopal je zlasti Oddelek za arheologijo, ki je izkoristil slabo kadrovsko sestavo na Oddelku za etnologijo in kulturno antropologijo in na Oddelku za umetnostno zgodovino, kjer na samem začetku izvajanja omenjenega študijskega programa še ni bilo habilitiranih profesorjev. V tem smislu se je študijski program Heritologija začel v okrnjeni sestavi, kar se danes kaže v pomanjkanju interdisciplinarnega sodelovanja. Po Hudalesovi oceni je ta študijski program danes v veliki krizi, saj vpisov kandidatov nanj praktično ni. S petih kandidatov letno so v zadnjih letih prišli na enega, zgodilo pa se je že, da v kakšnem letu niso imeli niti enega vpisa. Hudales si želi, da bi se v letošnjem letu stanje spremenilo. Sam je postal koordinator tega študijskega programa, potrudil se bo, da se letos vanj vpišejo novi študentje. Dopolnil je še Muršičevo predstavitev trenutnih predavanj iz muzeologije in konservatorstva na Oddelku za etnologijo in kulturno antropologijo. Trenutno je na Oddelku za muzeologijo in konservatorstvo za prvo študijsko stopnjo namenjenih 240 pedagoških ur, od tega 60 ur za muzeologijo, 60 ur za konservatorstvo in 60 ur za vaje za vsakega od omenjenih predmetov posebej. To pomeni, da imajo na Oddelku za področje varstva kulturne dediščine na voljo največji obseg ur od vseh univerz v Sloveniji. V tem smislu Hudales nima pripomb, bolj pa ga skrbi medinstitucionalno sodelovanje, ki ga je po njegovi oceni premalo, zlasti pogreša več sodelovanja z muzeji in Zavodom za varstvo kulturne dediščine Slovenije. Vaje, ki jih vodi kolega Miha Kozorog, so kakovostne. Doslej so z njimi realizirali že kar nekaj raziskovalnih projektov, ki so jih financirale lokalne skupnosti.

Robert Peskar je pojasnil situacijo na Oddelku za umetnostno zgodovino, kjer je predavatelj predmeta iz konservatorstva. Pojasnil je, da obsega program na področju konservatorstva skupaj 60 pedagoških ur, od tega 30 ur za predavanja in 30 ur za seminar. Priznal je, da imajo študentje trenutno manj možnosti za spoznavanje dela in specifike konservatorske službe, saj zaradi slabega oziroma neugodnega termina predavanj s seminarjem težko izpelje seminar na terenu.

Moderatorja sta z vprašanjem, kakšne so izkušnje gostov z medinstitucionalnim sodelovanjem oziroma kakšne so izkušnje gostov s sodelovanjem z Zavodom za varstvo kulturne dediščine Slovenije, začela še zadnjo temo okrogle mize. Z vprašanjem sta najprej izzvala kolegico **Alenko Černelič Krošelj**, saj ima veliko izkušenj s sodelovanjem s konservatorsko službo. Kolegica Černelič Krošelj je priznala, da so medinstitucionalna sodelovanja na splošno težka, saj po njeni oceni za kaj takega enostavno nismo še dovolj zreli. S konservatorji in njihovimi območnimi enotami ima dobre in slabe izkušnje. Zelo je pohvalila delo in sodelovanje z ljubljanskimi konservatorji, ko je delala še v Krškem. Z njimi je sodelovala v različnih vlogah, v imenu lastnika, upravljavca in investitorja. Pogosto je nastopala tudi kot mediatorka med konservatorji in ostalimi deležniki obnove. Prepričana je, da je treba na ravni medinstitucionalnega sodelovanja še veliko delati. Želi pa si več sodelovanja s konservatorji novomeške območne enote, saj se je pri zadnjih nujnih investicijskih posegih na brežiškem gradu, v katerem domuje Posavski muzej, pokazalo, da sta nujna stalna prisotnost konservatorja in več sodelovanja v vseh fazah. Na splošno pogreša enakovredno sodelovanje tudi drugih deležnikov pri obnovi dediščine, saj je njihovo sodelovanje za uspešnost obnove nujno. Kritična je bila do tega, da se strokovnjaki radi izgovarjajo na pomanjkanje časa. Po njenem si mora strokovnjak vzeti čas za problematiko varstva in ohranjanja dediščine, se pogovoriti z vsemi deležniki in skupaj z njimi načrtovati delo. Izpostavila je še, da pogreša pravočasno vključevanje muzejskih institucij v procese oz. projekte obnov, ker upravljavec nima zakonske funkcije in ga večkrat spregledajo. Zato bi od konservatorjev pričakovala več pravočasnih informacij pred samim začetkom načrtovanja posameznega projekta.

Na podvprašanje moderatorjev, kako bi bilo mogoče organizirati skupno strokovno delo kustosov in konservatorjev pri posameznih strokovnih nalogah, npr. pri topografskih obdelavah nepremične kulturne dediščine na terenu in popisu njene notranje opreme ali pri izdelovanju načrtov upravljanja, kar predvideva tudi Zakon o varstvu kulturne dediščine, je Alenka Černelič Krošelj odgovorila, da ima muzej s tem sicer nekaj izkušenj, vendar sama ugotavlja, da v muzejih težko načrtujejo skupne projekte, saj skačejo iz projekta v projekt. Zelo težko načrtujejo svoje delo dolgoročno. Že z rednim delom imajo veliko dela, skrbeti pa bi morali še za privatne zbirke na terenu. Slednjih je toliko, da bi se lahko ukvarjali samo še z njimi. Na območju delovanja Posavskega muzeja je trenutno aktualnih pet privatnih zbirk, ki jih je muzeju uspelo inventarizirati. Ne upa pa si razmišljati o tem, kaj se bo z njimi zgodilo potem, ko bodo lastniki umrli. Nekoliko zavida arheološki stroki v konservatorstvu, kjer so s standardi, pravilniki in navodili pripravili sistematičen pristop k najdbam na terenu, k obdelavi in predaji gradiva v pristojni muzej. Vsekakor meni, da je pohvalno, da je zavodu uspelo vzpostaviti mrežo ponudnikov na trgu, ki so pristojni za arheološke raziskave in izkopavanja.

Robert Peskar je repliciral kolegici Černelič Krošelj z mnenjem, da v arheologiji ni vse tako idealno, kot se zdi na prvi pogled. Po njegovem je Zakon o varstvu kulturne dediščine iz leta 2008 povzročil vrsto anomalij. Ena od teh je, da je predvidel raziskave in odstranitev ogrožene arheološke dediščine, kar je seveda v nasprotju z načeli varstva in ohranjanja kulturne dediščine na mestu nastanka (*in situ*). Poleg tega na zavodu ugotavljajo, da izvajalcem predhodnih arheoloških raziskav in arheoloških izkopavanj ne uspe zagotavljati vseh strokovnih standardov, ki so določeni s posameznimi pravilniki, saj je dejavnost na trgu in tako delo dobi najcenejši ponudnik, ki standardov zaradi (pre)nizkih cen ne more zagotoviti.

Voditelja okrogle mize sta se v nadaljevanju obrnila na **Jako Repiča** z vprašanjem, kako tu lahko pomaga Oddelek za etnologijo in kulturno antropologijo s svojimi študenti. Repič je pojasnil, da možnosti obstajajo znotraj redne prakse, ki jo morajo študentje opraviti v okviru študija. Na prvi in drugi stopnji morajo opraviti skupaj štiri prakse, katerih cilji so, da študentje spoznajo poklice in razvijajo socialne veščine, da spoznajo praktične poklicne veščine ter da spoznajo delo in specifike drugih institucij. Oddelek pri tem ne zahteva od študentov, kje točno morajo opraviti prakso, temveč si jo študentje sami organizirajo. Na oddelku imajo zelo dobro izkušnjo z opravljanjem študentske prakse v Slovenskem etnografskem muzeju, s katerim je oddelek sklenil tudi dolgoročni dogovor o izvajanju prakse v njihovi instituciji. To poteka zelo usklajeno in uspešno. Po Repičevem mnenju bi podoben dogovor oddelek lahko sklenil tudi z Zavodom za varstvo kulturne dediščine Slovenije. Ta naj na oddelek posreduje opis del, oddelek pa bo med študenti poskrbel za promocijo izvajanja prakse na zavodu. Po Repičevem mnenju so dobra oblika sodelovanja

tudi terenske vaje in poletni raziskovalni tabori. Slednjih oddelek ne organizira, je pa po mnenju Repiča zanje med študenti kar nekaj zanimanja.

Špela Ledinek Lozej se je vključila v pogovor o neizkoriščenih možnostih medinstitucionalnega sodelovanja s predstavitvijo dobre prakse pri delu Toneta Cevca. Cevc je sodeloval z Vlastom Kopačem, takratnim ravnateljem medobčinskega zavoda za spomeniško varstvo v Ljubljani, nato tudi pri interdisciplinarnih raziskavah z arheologi. Prav ta sodelovanja z različnimi institucijami in vedami so po mnenju Špele Ledinek Lozej spodbudila nove raziskovalne procese. Sama vidi prednosti medinstitucionalnega in interdisciplinarnega dela v bolj plodnem strokovnem delu, zato ga po njenem velja spodbujati, še posebno takrat, kadar so temu naklonjene institucije in posamezniki v njih. O težavnem premoščanju medinstitucionalnih pogledov na skupno obravnavanje materialne in nematerialne kulturne dediščine sta spregovorila tudi gosta iz Avstrije in Hrvaške.

Gorazd Živkovič je izpostavil učni center v Mauerbachu[9] pri Dunaju, kjer organizirajo različne izobraževalne delavnice o obnovi kulturne dediščine. Delavnice, ki trajajo od enega dne pa vse do dveh tednov, so načrtovane interdisciplinarno in so odprte za strokovnjake in vso ostalo zainteresirano javnost. Živkovič je posebej opozoril, da se z nematerialno dediščino v Avstriji ne ukvarjajo na državni ravni, temveč na lokalni in regionalni (deželni). Z njo se največ ukvarjajo društva, ki v njej prepoznavajo svojo identiteto. Omenil je, da so bila v zadnjem času uspešna koroška prizadevanja za uvrstitev lokalnih (slovenskih) ledinskih in hišnih imen na Unescov seznam nesnovne kulturne dediščine.[10] Pobuda je prišla iz lokalnega okolja, kar je tudi prav, saj lahko le to zagotavlja preživetje dediščine, ne pa spomeniško varstvo ali narodopisni inštitut. Živkovič je še dodal , da se pri svojem konservatorskem delu na avstrijskem Koroškem redno povezuje z etnologi iz Inštituta Urban Jarnik v Celovcu, zlasti z Martino Piko-Rustia in Uši Sereinig. To ni običajna praksa, saj so, razen v redkih izjemah, konservatorji formalno zadolženi samo za kulturne spomenike in njihovo arhitekturno zasnovo, ne pa tudi za notranjo opremo. Vsekakor se pri državnem spomeniškem varstvu inventarizaciji notranje opreme v kulturnih spomenikih po možnosti izognejo, ker vedo, da je to opremo težko spremljati in nadzirati. Zlasti grajska oprema je v Avstriji iskano tržno blago. Iz tega razloga notranja oprema navadno ni razglašena skupaj s kulturnim spomenikom. Izjema je oprema javnih in cerkvenih spomenikov, za katero še velja spomeniški zakon iz leta 1924.

Sanja Lončar je opisala še stanje na Hrvaškem, kjer osnovno organizacijo varstva kulturne dediščine poleg Ministrstva za kulturo sestavlja še 21 regionalnih konservatorskih oddelkov in en mestni oddelek, ki pokriva njihovo glavno mesto. Ti oddelki so nastali s centralizacijo starih zavodov, v katerih je bilo v preteklosti bistveno več zaposlenih etnologov. Trenutno na Hrvaškem v desetih konservatorskih oddelkih ni zaposlenega etnologa, njegovo delo zelo pogosto opravlja kar umetnostni zgodovinar. Etnologi se v konservatorskih oddelkih največ ukvarjajo z nepremično kulturno dediščino, s premično in nesnovno pa se ukvarjajo zaposleni na Upravi za varstvo kulturne dediščine pri Ministrstvu za kulturo, kjer so za ta področja organizirane posebne službe. Sanja Lončar ugotavlja, da se na konservatorskih oddelkih zaradi pomanjkanja kadrov vse manj ukvarjajo z evidentiranjem etnološke nepremične dediščine in z njenim prostorskim varstvom. Trenutno sodeluje s konservatorskim oddelkom iz Siska, kjer že več let zapored dokumentira dediščino, ki je pomembna za kulturno krajino. S študenti sodeluje s posameznimi institucijami tudi pri popisih privatnih muzejskih zbirk. V okviru Oddelka za etnologijo organizira večdnevno terensko delo za študente, na katerem sistematično popisujejo zbirke. Z nesnovno dediščino pa se pogosto ukvarjajo njeni kolegi z oddelka ali pa kolegi iz Inštituta za etnologijo in folkloristiko.

V diskusijo se je vključil **Rajko Muršič**. Opozoril je na pomen dokumentarnega filma, katerega odlomek je bil predvajan na začetku okrogle mize. Po njegovem nas je vsebina filma spomnila na to, da se je etnološko konservatorstvo v okviru interdisciplinarnega sodelovanja začelo v bistvu najprej v mestih. Šele kasneje so etnologi konservatorji začeli delati tudi po vaseh. Tisto, kar se mu zdi izjemno pomembno za prihodnost etnologije in konservatorstva, je, da morajo biti diplomanti Oddelka za etnologijo in kulturno antropologijo še naprej sposobni delati v urbanem okolju. Zelo pomembno oziroma nujno je, da se etnologi konservatorji ponovno vključijo v konservatorsko delo v mestih, saj je tu ogromno dela in še več ga bo. Izpostavil je, da ga zato zelo moti, ker vodstvo konservatorske službe ne omogoči pogojev za vključevanje etnologov konservatorjev v delo v mestih.

Vito Hazler se je v diskusijo vključil z vprašanjem za generalnega konservatorja, in sicer ga je zanimalo, kdo trenutno v državi izdeluje konservatorske načrte. Ali je to še vedno domena konservatorjev, ali izvajalcev na trgu? Po njegovem mora biti izdelava konservatorskih načrtov izključna domena konservatorjev na območnih enotah, saj je konservatorski načrt vrhunec konservatorskega strokovnega dela. Če konservatorska služba ne bo delala konservatorskih načrtov, bo njeno strokovno znanje stagniralo.

Robert Peskar je pojasnil, da Zavod za varstvo kulturne dediščine Slovenije še vedno izdeluje konservatorske načrte. Je pa res, da jih lahko izdelujejo tudi izvajalci na trgu v skladu s Pravilnikom o konservatorskem načrtu, ki je bil sprejet leta 2009. To je povezano s tem, da je bil Zavod za varstvo kulturne dediščine Slovenije po zakonu razdeljen na upravno-administrativni (Služba za konservatorstvo z območnimi enotami) in izvajalski del (Center za konservatorstvo z Restavratorskim centrom in Centrom za preventivno arheologijo). Izdelovanje konservatorskih načrtov je po letu 2008 pripadlo Restavratorskemu centru. Po nekajletni praksi se je izkazalo, da to ni optimalna rešitev, zato je prišlo do spremembe zakonodaje. Po novem, od leta 2013, lahko konservatorji z območnih enot sodelujejo pri izdelovanju konservatorskih načrtov.[11] V zadnjem obdobju so nekaj konservatorskih načrtov izdelale območne enote samostojno, dva konservatorska načrta je na primer izdelala novomeška območna enota. Tudi sam je imel z izdelavo konservatorskih načrtov izkušnje, saj je preizkusno izdelal enega od njih in za to porabil približno mesec dni. Na podlagi teh izkušenj in izkušenj drugih kolegov, ki so pregledovali konservatorske načrte, ki so bili izdelani na trgu, je prišel do pomembne ugotovitve, in sicer, da izvajalci, ki delujejo na trgu, nimajo dovolj izkušenj za izdelavo kakovostnih konservatorskih načrtov. Ti so bili najbolj pomanjkljivi z vidika vrednotenja kulturnega spomenika in prikaza njegovega razvoja.

Voditelja okrogle mize sta z vprašanjem, kakšne so konkretne konservatorske izkušnje z izdelovalci konservatorskih načrtov v praksi, izzvala še **Marinko Dražumerič**, ki se je uvodoma strinjala s Hazlerjevim stališčem, da morajo konservatorske načrte izdelovati konservatorji. Po njenem nihče drug ne more izdelati konservatorskega načrta korektno. Tudi vso dokumentacijo o kulturnem spomeniku hrani konservatorska služba. Poleg tega gre v primeru, da konservatorski načrt izdela izvajalec na trgu, za diskreditacijo konservatorja, ki na kulturnem spomeniku dela na primer že deset, dvajset let ali še več. Res se je zakonodaja po letu 2013 nekoliko spremenila v prid temu, da lahko pri konservatorskih načrtih sodelujejo tudi konservatorji, vendar ti še vedno niso nosilci naloge. Po njenem mnenju tudi ni pohvalno, da se generalni konservator pohvali z dvema primerkoma konservatorskih načrtov, ki ju je izdelala novomeška območna enota, saj je to bistveno premalo. Zavod bi se po njenem moral potruditi, da jih izdela čim več, saj gre pri tem za konservatorjevo temeljno strokovno delo. V to delo je vključeno tudi tisto strokovno in znanstveno delo, za katero so konservatorji z novo zakonodajo zelo prikrajšani.

Gorazd Živkovič je predstavil avstrijsko izkušnjo. Povedal je, da v Avstriji izdelujejo konservatorske načrte zunanji samostojni izvajalci, kar se mu ne zdi sporno. Strokovni uslužbenec spomeniške službe nadzoruje izdelavo konservatorskega načrta, vpliva na izbor izvajalcev in na koncu konservatorski načrt tudi potrdi, če je izdelan v skladu s strokovnimi standardi. Izdelovanje konservatorskih načrtov je med drugim tudi časovno zahtevno delo, ki ga peterica konservatorjev, kolikor je pristojnih za celotno avstrijsko Koroško, ne zmore opraviti sama. Avstrijski in slovenski sistem se tu razlikujeta.

Vito Hazler je k temu dodal, da sam sicer spoštuje avstrijski sistem, vendar pa vseeno zagovarja strokovnost konservatorjev in restavratorjev na Zavodu za varstvo kulturne dediščine Slovenije. Po njegovi oceni gre za vrhunske strokovnjake, ki so usposobljeni, da vodijo obnovo kulturnih spomenikov. Govorimo o tem, da so usposobljeni za vodenje najzahtevnejših strokovnih nalog. Podobno velja po njegovem še za strokovnjake, ki so zaposleni v muzejih in arhivih. Govorimo torej lahko o treh stebrih strokovne službe, ki je plačana iz državnega proračuna, da strokovno vodi in opravlja svoje delo. Hazler je predlagal, naj se kot enega od zaključkov okrogle mize oblikuje in sprejme zaključek, da se izdelovanje konservatorskih načrtov zaupa izključno Zavodu za varstvo kulturne dediščine Slovenije. V tem duhu tudi sam izobražuje svoje študente na Oddelku za etnologijo in kulturno antropologijo, kjer se že vso pedagoško kariero trudi, da bi vzgojil etnologe, ki bodo kot konservatorji vrhunsko opravljali konservatorsko strokovno delo.

Robert Peskar se je načeloma strinjal z oceno Vita Hazlerja, je pa ob tem omenil, da se konservatorji v vsakdanji praksi srečujejo z absurdnimi situacijami, ko na primer neizkušen konservator na terenu poučuje obrtnega mojstra z dolgoletnimi izkušnjami o tem, kako tehnološko izvesti določeno obrtniško delo na kulturnem spomeniku. To je po njegovem nesprejemljivo. Konservator se mora zavedati svojega znanja in zmožnosti. Naučiti se mora spoštovati delo in izkušnje obrtnikov oziroma izvajalcev. Peskar tudi ugotavlja, da konservatorjem primanjkuje nekaterih znanj. Tu so do neke mere krivi sami konservatorji, ker ne poskrbijo, da bi se dodatno izobrazili. Delno pa pripisuje krivdo tudi samemu zavodu, ker še ni pripravil nabora izobraževalnih programov za pridobitev osnovnih konservatorskih znanj. Peskar je še povedal, da po njegovi oceni ni dobro, da ima konservatorska služba preveliko avtoritativno moč, saj je konservatorsko delo ves čas pod drobnogledom javnosti. Ob tem pa je posebej opozoril na dejstvo, da v Sloveniji namenimo premalo finančnih sredstev za obnovo kulturne dediščine. Zelo dobro imamo urejeno pravno zaščito dediščine, nimamo pa učinkovitega sistema financiranja njene obnove. Dokler tukaj ne bo prišlo do nekega premika, po njegovem bistvenih sprememb na področju varstva in ohranjanja kulturne dediščine v državi ni pričakovati. Dodal je še, da bi na tej okrogli mizi pričakoval kakšnega predstavnika odgovornih resorjev, npr. Ministrstva za kulturo, Ministrstva za finance, pa še kakšnega, pa jih seveda ni.

9 Gre za Informations- und Weiterbildungszentrum Bundesdenkmalpflege, ki ima sedež v kartuziji Mauerbach pri Dunaju. V njem organizirajo okoli 25 učnih delavnic letno za konservatorje, restavratorje, obrtnike in druge zainteresirane.

10 Leta 2010 so bila na pobudo narodopisnega inštituta Urban Jarnik stara ledinska in hišna imena na Koroškem sprejeta na avstrijski seznam Unescove nesnovne dediščine. Več o tem projektu se lahko prebere na njihovi spletni strani.

11 Sodelovanje konservatorjev z območnih enot pri izdelavi konservatorskih načrtov določa 29. člen Zakona o spremembah in dopolnitvah Zakona o varstvu kulturne dediščine (ZVKD-1C), Uradni list RS, št. 111/13.

Zaključki okrogle mize

Na podlagi predstavitev izkušenj gostov okrogle mize in diskusije obiskovalcev so bili na koncu sprejeti naslednji zaključki:

1. Pogovor na okrogli mizi je pokazal, da je treba o obravnavanih strokovnih temah pogosteje odprto in javno diskutirati.
2. Vlogo etnologije v konservatorstvu v 21. stoletju je treba poglobljeno osvetliti na posebnem strokovnem ali znanstvenem posvetu. Organizira naj ga Zavod za varstvo kulturne dediščine Slovenije in k sodelovanju povabi Slovensko konservatorsko društvo, Slovensko etnološko društvo, Slovenski etnografski muzej, Oddelek za etnologijo in kulturno antropologijo Filozofske fakultete v Ljubljani in Inštitut za slovensko narodopisje ZRC SAZU.
3. Ministrstvo za kulturo in Zavod za varstvo kulturne dediščine Slovenije naj v programih dela za obdobje 2020–2023 zagotovita tudi finančne in kadrovske pogoje za izdajo prve temeljne literature s področja konservatorstva in stavbarstva. Prednost naj imajo interdisciplinarne in medinstitucionalne publikacije.
4. Zavod za varstvo kulturne dediščine Slovenije naj svoje zaposlene spodbuja k vpisu na doktorski študij varstva in ohranjanja kulturne dediščine.
5. Zavod za varstvo kulturne dediščine Slovenije naj čim prej poskrbi za sprejetje vseh potrebnih strokovnih standardov za konservatorsko in restavratorsko delo, saj je za to pristojen in se to od njega tudi pričakuje.
6. Zavod za varstvo kulturne dediščine Slovenije naj oblikuje nabor interdisciplinarnih izobraževalnih vsebin kot del obveznega internega izobraževanja in usposabljanja zaposlenih.
7. Zavod za varstvo kulturne dediščine naj (v sodelovanju z Inštitutom za slovensko narodopisje ZRC SAZU in Oddelkom za etologijo in kulturno antropologijo FF) oblikuje nabor nujno potrebnih temeljnih etnoloških raziskav, ki bi etnologom konservatorjem olajšale delo, in s tem seznani Ministrstvo za izobraževanje, znanost in šport ter skuša doseči, da so pomanjkljivo raziskane topike prioritetno vključene (in njihovi rezultati upoštevani kot kazalnik dosežkov na področju družbenih in kulturnih dejavnosti) v vrednotenje prijav nadaljevanja dosedanjih etnoloških programov oziroma, še bolje, pri razpisu morebitnih novih s strani ARRS.
8. Ministrstvo za kulturo naj z razpisi in financiranjem programov spodbuja medinstitucionalno sodelovanje na področju varstva in ohranjanja kulturne dediščine.
9. Zavod za varstvo kulturne dediščine Slovenije naj se z Oddelkom za etnologijo in kulturno antropologijo Filozofske fakultete v Ljubljani dogovori o izvajanju obvezne študentske prakse na zavodu.
10. Prakso izdelovanja konservatorskih načrtov na trgu je treba prekiniti, dokler Zavod za varstvo kulturne dediščine Slovenije ne sprejme vseh potrebnih strokovnih standardov. Do takrat naj jih izdelujejo konservatorji omenjenega zavoda.
11. Etnologi v konservatorski službi naj se intenzivneje vključujejo v konservatorsko delo v mestih.

Navodila avtorjem za pripravo prispevkov v reviji Varstvo spomenikov

PREDSTAVITEV

1. Varstvo spomenikov je osrednja slovenska znanstvena strokovna revija za teorijo in prakso spomeniškega varstva. Izdaja jo Zavod za varstvo kulturne dediščine Slovenije
2. Revija izhaja od leta 1946. Do leta 2010 je izhajala z eno številko na leto.
3. Revija se vsebinsko deli na dva dela. V prvem (daljšem) delu so objavljeni prispevki z oznakami COBISS (**C**o-operative **O**nline **Bi**bliographic **S**ystem and **S**ervices) od 1.01 do 1.04, pri čemer pomeni 1.01 izvirni znanstveni članek, 1.02 pregledni znanstveni članek, 1.03 kratki znanstveni prispevek in 1.04 strokovni članek. Prispevki, ki so objavljeni v tem delu revije, so recenzirani in štejejo kot referenčni v domačem in tujih znanstvenih okoljih. Kategorijo prispevka predlaga avtor, končno odločitev pa sprejme uredniški odbor na podlagi predloga recenzenta.

   Drugi (krajši) del, ki sledi prvemu, je namenjen objavi recenzij (oznaka COBISS 1.19), predstavitvam (npr. knjig, projektov, dogodkov, predavanj, konferenc itd.), knjižničnim informacijam idr. Prispevki, ki so objavljeni v tem delu revije, se ne recenzirajo. Prvi del se imenuje Razprave, drugi del pa Predstavitve.

VRSTA, OBSEG IN SESTAVA PRISPEVKOV

4. Številke praviloma niso tematsko usmerjene. Objavljeni so prispevki različnih znanstvenih ved in disciplin (npr. arheologija, etnologija, umetnostna zgodovina, arhitektura, krajinska arhitektura, konservatorstvo, restavratorstvo, geografija ipd.), ki sledijo znanstvenemu in profesionalnemu zanimanju avtorjev za varovanje, raziskovanje in upravljanje kulturne dediščine, mednarodne akte in nacionalno zakonodajo, prostorsko načrtovanje in informatiko na področju spomeniškega varstva, konservatorske študije, zgodovino in doktrino spomeniškega varstva itd.
5. Prispevki v Razpravah so objavljeni v slovenščini in angleščini. Za prevode praviloma poskrbi uredništvo.
6. Razprave praviloma obsegajo največ 1,5 avtorske pole (24 strani po 30 vrstic s 64 znaki oz. 46.000 znakov s presledki), prispevki iz sklopa Predstavitve in informacije pa največ 5 strani (9300 znakov).
7. Sestavine razprav si sledijo v naslednjem zaporedju: naslov prispevka, izjemoma tudi podnaslov, izvleček, ključne besede, besedilo prispevka, ki je razdeljeno na posamezna poglavja (uvod in sklep sta obvezni poglavji), viri in literatura ter povzetek. Naslov in podnaslov članka, ki primerno opisujeta vsebino prispevka, naj natančno, vendar kratko in jedrnato označita bistveno vsebino. V prispevku najpomembnejši obravnavani pojmi naj bodo praviloma navedeni na začetku naslova oziroma podnaslova. Naslov naj ne presega priporočenih 140 znakov. Izvleček naj obsega največ 6–10 vrstic (do 650 znakov). Biti mora razumljiv sam po sebi, brez branja celotnega prispevka; vsebuje naj oris metodologije in rezultatov; uporabljajo naj se celi stavki, izogibati se je treba slabše znanim kraticam in okrajšavam. Kratice naj bodo ob prvi uporabi razvezane v slovenskem jeziku. Če to ni mogoče, kratico razvežemo v jeziku, v katerem je nastala. Ključne besede naj obsegajo 3–8 besed, ki označujejo vsebino prispevka; to naj bodo enostavni izrazi, zapisani v prvem sklonu ednine. Avtor naj poskuša izbrati take ključne besede, ki so že v splošni rabi v sistemu COBISS. Za UDK-vrstilec oz. klasifikacijsko oznako poskrbi uredništvo. Povzetek obsega 30–45 vrstic (največ 1900 znakov). V njem avtor jasno opredeli namene, glavne značilnosti in metodologijo raziskovalnega dela ter najpomembnejše rezultate in sklepe prispevka. Besedilo prispevka mora biti pregledno in razumljivo strukturirano z naslovi poglavij in podpoglavij. Dovoljeni sta največ dve ravni podpoglavij. Avtor lahko priloži tudi kratko zahvalo, ki bo objavljena pred seznamom virov in literature.
8. Zaradi zagotovitve anonimnosti pri recenzijskem postopku mora(-jo) avtor(-ji) svoje ime in priimek navesti posebej, in sicer na prvi strani prispevka. Dopiše(-jo) naj tudi svoj akademski in pedagoški naziv ali znanstveni naziv ter diplomski naziv. Za diplomske nazive naj se uporabljajo uradne okrajšave, za pedagoške in znanstvene nazive pa naj se okrajšave ne uporabljajo. Avtorice naj napišejo svoje pedagoške nazive v ženski obliki (npr. docentka). Sledi naslov institucije, v kateri je avtor zaposlen, oziroma drugi ustrezen naslov in naslov elektronske pošte. Če je avtorjev več, vrstni red določijo sami. Drugih podatkov naj prva stran prispevka ne vsebuje.
9. Za predstavitve knjig in za recenzije (oznaka COBISS 1.19), objavljene v drugem delu revije, mora avtor najprej navesti naslov prispevka. Ta je lahko poljuden in ni nujno, da je povsem enak kot naslov knjige ali dela, ki ga avtor predstavlja oziroma ocenjuje, vendar pa se mora nanašati na vsebino/recenzijo predstavljenega dela oziroma knjige, biti mora čim krajši in čim manj zapleten. Za naslovom mora avtor navesti še: izvirni naslov dela, ime in priimek avtorja(-jev), ime in priimek urednika(-ov), založbo in leto izdaje ter ISBN-številko.

OBLIKOVANJE IN JEZIK PRISPEVKOV

10. Prispevki morajo biti napisani z urejevalnikom besedil Microsoft Word. V celotnem prispevku naj bo uporabljen le en slog, in sicer privzet slog Normal. To pomeni, da morajo imeti prispevki enojni medvrstični razmik, tip črk Times New Roman, velikost črk 12, levo poravnavo in 2,5-centimetrske robove pri formatu A4. Ta normativ je nekoliko drugačen le pri grafičnih prilogah (tip pisave v grafičnih prilogah mora biti Arial, velikost črk pa ne sme biti manjša od 10). Strani v prispevku naj bodo zaporedno oštevilčene, številka strani pa naj bo na dnu strani postavljena na sredino.
11. Besedilo prispevka naj bo preprosto oblikovano. Ni dovoljeno uporabljati zamikov, deljenja besed, podčrtavanja, senčenja ali kakršnih koli drugih načinov oblikovanja, razen označitve krepke in ležeče pisave. Besedilo naj bo v celoti izpisano z malimi črkami (razen velikih začetnic) in naj bo brez nepotrebnih okrajšav. Če se okrajševam ni mogoče izogniti, naj jih avtor pri prvi navedbi pojasni.
12. Izvirne izraze/termine lahko avtor zapiše ob izrazih, prevedenih v slovenski jezik. Izraz naj avtor zapiše v oklepaju za slovenskim prevodom, pri čemer napiše najprej okrajšavo jezika, v katerem je zapisan izvirni izraz/termin (na primer: angl. (za angleški jezik), nem. (za nemški jezik), fr. (za francoski jezik) itd.), nato izraz/termin, in sicer v ležeči pisavi. Slovenski prevod izraza/termina naj avtor postavi v narekovaje .
13. Pri naštevanju in navajanju enot, ki si v alinejah sledijo druga pod drugo, ni dovoljeno uporabljati funkcije za avtomatsko označevanje in oštevilčevanje, ki jo ima program Microsoft Word. Avtor naj enote, ki si v alinejah sledijo druga pod drugo, številči ali označuje ročno, čeprav zaradi tega besedilo ne bo poravnano v navpični liniji. Enako velja tudi za številčenje naslov, podnaslov, poglavij, podpoglavij, preglednic in slik. Če pri navajanju enot v alinejah avtor ne uporablja številk, naj alineje označi s pomišljaji.
14. Prispevki, objavljeni v slovenščini, morajo biti napisani v slovenskem knjižnem jeziku in ob upoštevanju pravil Slovenskega pravopisa (2003, 2007).
15. Uporaba tujk v prispevkih v slovenskem jeziku je dovoljena le, če ne obstaja primernejši izraz v slovenskem jeziku.

PREGLEDNICE IN GRAFIČNE PRILOGE

16. Za tabele se v prispevku uporablja poimenovanje preglednica. Preglednice so umeščene med besedilo prispevka in ne smejo presegati 2,5-centimetrskega roba. Vsaka preglednica mora biti razumljiva, pregledna in preprosta, brez dodatnega pojasnjevanja in opisovanja. Sestavljajo naj jo vrstice in stolpci, katerih vidne črte se sekajo v poljih. Polj naj avtorji ne senčijo. Preglednice morajo biti zaporedno oštevilčene z arabskimi številkami in morajo imeti naslove. Naslov preglednice naj bo nad preglednico. Med številko in naslovom naj bo dvopičje. Naslovi preglednic naj bodo čim krajši in čim manj zapleteni. Naslov preglednice naj se s piko zaključi le, če gre za stavčno poved. Avtor pod preglednico dopiše tudi vire za podatke v preglednici. Uporabljeni viri morajo biti (v celoti) navedeni v končnem seznamu virov in literature.
17. Za vsako grafično prilogo (fotografija, zemljevid, grafikon, skica in podobno) se uporablja enotno poimenovanje: slika. Slike ne smejo biti umeščene med besedilom prispevka. Oštevilčene morajo biti enotno z arabskimi

številkami in morajo imeti naslove. Med številko in naslovom mora biti dvopičje. Naslovi slik naj bodo čim krajši in čim manj zapleteni. Avtor za naslovom dopiše tudi vir(–e) grafične priloge, in sicer na način, kot je za sklicevanje na vire in literaturo med besedilom določeno v teh navodilih. Pri fotografijah in ilustracijah, ki niso vzete iz virov, ampak so avtorsko delo, se za naslovom slike dopišeta ime in priimek avtorja fotografije/ilustracije. Naslov slike se za navedbo virov (ali avtorja fotografije/ilustracije/risbe) s piko zaključi le, če gre za stavčno poved.

18. Če se avtor med besedilom prispevka sklicuje na grafične priloge (npr. jih opisuje, komentira itd.) oziroma če grafična priloga dopolnjuje besedilo prispevka, mora biti v besedilu obvezno navedeno, na katero grafično prilogo se avtor sklicuje, oziroma mora biti na najprimernejšem mestu v besedilu navedeno, katera grafična priloga dopolnjuje besedilo. Pri sklicevanju na grafične priloge je treba uporabljati njihove številke: npr. (sl. 1), kot je razvidno s slike 1, kot prikazuje slika 1 itd.
19. Če sestavlja eno sliko več grafičnih podob (npr. vertikalni in/ali horizontalni niz fotografij, skic, tabel itd.), mora biti vsak posamezen sestavni del slike vidno in jasno oštevilčen. V podpisu k sliki naj avtor zapiše številko posameznega sestavnega dela slike in naslov/pojasnilo tega sestavnega dela slike, in sicer na način, kot je navedeno pri spodnjem primeru. Tak naslov grafične priloge se zaključi s piko.
20. Če vsebuje grafična priloga besedilo (npr. napisi na skicah, legenda v grafikonu, napisi/besedilna navedba enot na abscisnih in ordinatnih oseh v grafikonih ipd.), mora biti to besedilo napisano v slovenščini in angleščini. Napisi naj bodo čim manj zapleteni in čim krajši (npr. če so v grafikonih napisi oziroma besedilne navedbe enot na abscisnih/ordinatnih oseh in na drugih mestih dolgi, je bolj smiselno, da avtor te enote označi s številkami, številke pa pojasni v legendi).
21. Tip pisave v vseh grafičnih prilogah mora biti Arial, črke pa ne smejo biti manjše od 10. Pisava mora imeti enojni medvrstični razmik in levo poravnavo pri formatu A4.
22. Grafične priloge (razen grafikonov) morajo avtorji oddati v digitalni rastrski obliki, z ločljivostjo vsaj 350 pik na palec (350 dpi), in sicer v formatu JPEG (v najvišji kvaliteti) ali TIFF. Širina slike s tako ločljivostjo naj bo najmanj 14,8 cm. Če avtorji ne morejo oddati grafičnih prilog v predpisani obliki, naj se pred oddajo posvetujejo z urednikom.
23. Grafikoni morajo biti izrisani s programom Microsoft Excel.
24. Vsaka grafična priloga mora biti shranjena in oddana uredništvu v svoji datoteki. Naslov posamezne slikovne datoteke naj bo sestavljen le iz priimka (prvega) avtorja, okrajšave sl, podčrtaja in zaporedne številke, ki jo ima slika v besedilu: npr. Fister_sl_1.
25. Avtor naj prostor, ki naj bi ga grafična priloga zasedla v prispevku, šteje v obseg besedila kot 250 besed (pol strani) oziroma 500 besed (cela stran).
26. Avtorji naj bodo zmerni pri številu grafičnih podob, ki jih nameravajo vključiti v prispevek. Vključijo naj le tiste, za katere menijo, da so potrebne za boljše razumevanje vsebine prispevka.

ŠTEVILKE IN MERILA

27. Merske enote naj temeljijo na metričnem merskem sistemu. Pri številih, večjih od 9999, se za ločevanje tisočic in milijonic uporabljajo pike (na primer 13.432 ali 1.514.800). Pri pisanju merila zemljevida se dvopičje piše nestično (na primer 1 : 500.000). Med številkami in enotami je presledek (na primer 135 m, 23,5 %), pred oznako za potenco ali indeksom številka pa presledka ni (na primer 143 km^2, b_3, 17 °C). Znaki pri računskih operacijah se pišejo nestično, razen oklepajev (na primer p = a + c – b – (a + c : b).

OKRAJŠAVE

28. Uporabljajo se slovenske verzije okrajšav in bibliografskih oznak (ur.; idr.; isti.; ista; prav tam).

    Okrajšava prim. se uporablja, kadar želimo opozoriti na stališče, ki je drugačno od našega ali od tistega, ki ga zagovarja avtor druge citirane knjige.

OPOMBE IN NAVAJANJE VIROV IN LITERATURE

29. Bibliografske opombe se pišejo med besedilom, vsebinske opombe pa kot sprotne opombe pod črto.

    Vsebinske opombe, ki vsebujejo dodatno avtorjevo besedilo, so oštevilčene z zaporednimi številkami od začetka do konca besedila. Opombe naj ne bodo predolge.
30. Če je avtor znan, naj bo v besedilu sklic na literaturo tak: (Zadnikar, 1982: 20–23) oziroma npr. Zadnikar (1982) ugotavlja, da ... Če sta avtorja navedenega dela dva, se navedeta oba: (Buser, Cajhen, 1980) oziroma npr. Buser in Cajhen (1980) ocenjujeta, da ... Pri večjem številu avtorjev se zapiše le priimek prvega avtorja, za druge avtorje se navede okrajšava idr., ki pomeni in drugi: (Benedetti idr., 2004) oziroma Benedetti idr. (2004) menijo, da ... Če je avtorjev šest ali manj, se v končnem seznamu virov in literature navedejo vsi avtorji, in sicer tako, kot je določeno v teh navodilih. Če je avtorjev več kot šest, se v končnem seznamu virov in literature navede prvih šest avtorjev, za druge pa se doda okrajšava idr., in sicer tako, kot je določeno v teh navodilih. Če je v prispevku uporabljenih več virov, ki imajo na začetku iste avtorje, je treba med besedilom navajati vse avtorje do vključno prvega različnega.
31. Dela enega avtorja, ki so izšla istega leta, je treba med seboj ločiti z zaporednim dodajanjem malih črk (a, b, c, č itd.) stično ob letnici izida (Božič, 1992a, 1992b) oziroma Božič (1992a, 1992b) navaja ... Tako jih je treba navesti tudi v končnem seznamu virov in literature. Dela različnih avtorjev, ki se vsa nanašajo na isto vsebino, je treba našteti po abecednem redu glede na avtorjev priimek, med posameznimi navedbami je podpičje: (Fister, 1987; Stopar, 1990; Zadnikar, 1975). Pri navajanju več del istega avtorja se navedejo avtor in zaporedne letnice izidov teh del, ki jih je treba ločiti z vejico: (Zadnikar, 1982, 1988). Če v besedilu zaporedno navedemo sklic na isto delo, se pri drugem in vseh nadaljnjih zaporednih sklicih v istem odstavku uporabi navedba: (prav tam). Če je delo še v tisku, se v oklepaju namesto letnice izdaje navede: (v tisku) – na ta način se delo navaja tudi v končnem seznamu virov in literature.
32. Dobesedni navedki morajo biti označeni z narekovaji, in sicer z dvojnimi srednjimi (» «). Stran, na kateri je dobesedni navedek v delu, se napiše za dvopičjem. Pika kot končno ločilo je za oklepajem, v katerem je zapisan vir citata. Če je besedilo citata v citiranem delu na dveh ali več straneh, se med stranema(–nmi) postavi stični pomišljaj (Zadnikar, 1982: 36–37).
33. Daljši dobesedni navedki (več kot 40 besed) naj bodo postavljeni v samostojen odstavek, napisani naj bodo z ležečo pisavo, pred odstavkom in za njim pa naj bo izpuščena po ena vrstica. Začetek in konec dobesednega navedka se v tem primeru ne označujeta z narekovaji. Pika kot končno ločilo je za oklepajem, v katerem je zapisan vir navedbe.
34. Pri dobesednih navedkih, ki imajo vmes posamezne dele izpuščene, se uporablja tropičje v oglatem oklepaju: […]. Za to oznako, če ni bil izpuščen samo del povedi, začnemo pisati ponovno z veliko začetnico. Če v citiranem delu to ni velika začetnica (npr. ker ni začetek stavka), označimo prvo črko z oglatim oklepajem.
35. Pri sklicih na vire, pri katerih avtor in urednik nista znana, se navedeta ime izdajatelja (v prispevkih v angleškem jeziku mora biti v tem primeru ime izdajatelja prevedeno v angleščino) in letnica izdaje dela, npr. za podatke, ki jih objavlja Statistični urad Republike Slovenije, se navede (Statistični urad Republike Slovenije, 2007). Za vire lahko uporabljamo tudi okrajšave, npr. za Statistični urad Republike Slovenije se uporabi okrajšava SURS, vendar mora biti v besedilu prispevka najprej navedeno ime vira v celoti, nato pa mora biti razloženo, da se bo za vir v nadaljevanju uporabljala okrajšava, ki jo avtor tudi razveže. Za navedeni primer (Statistični urad Republike Slovenije, 2007) bi se tako pri sklicu nanj v nadaljevanju uporabljalo (SURS, 2007).
36. Pri navajanju zakonov med besedilom se navedejo ime zakona, številka Uradnega lista Republike Slovenije in letnica, pri čemer se uporablja za Uradni list Republike Slovenije okrajšava: Ur. l. RS, npr. (Zakon o varstvu kulturne dediščine, Ur. l. RS, št. 16/2008). Pri dobesednem navajanju zakonov se doda še stran v Uradnem listu RS.
37. Če imajo zakoni uradne okrajšave, npr. ZVKD-1, se lahko te uporabijo, vendar mora biti v besedilu članka najprej navedeno ime zakona v celoti, nato pa mora biti razloženo, da se bo za ta vir v nadaljevanju uporabljala okrajšava, ki jo avtor tudi navede.

SEZNAM UPORABLJENIH VIROV IN LITERATURE

38. Vsa dela (viri in literatura), navedena v članku, morajo biti v abecednem seznamu navedena na koncu v sestavnem delu prispevka z naslovom Viri in literatura. Seznama avtor ne sme številčiti ali kakor koli drugače označevati (s pikami, pomišljaji). V primerih navedb, ki so prikazani spodaj, so ločila in oblika pisave (ležeče oziroma pokonci) navedeni točno tako, kot jih mora navesti tudi avtor v svojem prispevku.

Monografije in knjige (en avtor)

Fister, P. (1986): *Umetnost stavbarstva na Slovenskem*. Ljubljana, Cankarjeva založba.

Opomba: Priimek avtorja, Inicialka(–e) avtorjevega imena. (letnica izdaje dela): *Naslov dela: Morebitni podnaslov*. Kraj izdaje, Založba.

Monografije in knjige (od tri do šest avtorjev)

Pernet, L., Carlevaro, E., Tori, L., Vietti, G., Della Casa, P., in Schmid-Sikimić, B. (2006): *La necropoli di Giubiasco (TI): Vol. II, Les Tombes de La Tène finale et d'époque romaine*, Collectio archaeologica 4. Zürich, Musée national suisse.

Opomba: Če je avtorjev šest ali manj, se v končnem seznamu virov in literature navedejo vsi avtorji. Če je avtorjev več kot šest, se našteje prvih šest, nato pa sledi okrajšava idr.

Monografije in knjige (avtorji niso znani, znan je urednik)

Dromgoole, S. (ur.) (2006): *Legal protection of the Underwater Cultural Heritage: National perspectives in Light of the UNESCO Convention 2001*. Leiden, Martinus Nijhoff.

Diplomska in magistrska dela, doktorske disertacije, raziskovalna poročila

Uhač, M. (2003): *Brodolom na rtu Savudrija*. Diplomska naloga. Sveučilište u Zadru.
Verbič, T. (2008): *Poročilo o ogledu arheoloških izkopavanj na lokaciji NUK 2*. Raziskovalno poročilo. Ljubljana, Zavod za varstvo kulturne dediščine Slovenije, Območna enota Ljubljana.

Prispevki ali poglavja v monografijah, knjigah, enciklopedijah in zbornikih konferenc, zborovanj, seminarjev itd.

Dumont, A. (2000): Etat d'un cours d'eau à la fin du 18e siècle : la visite de la rivière d'Ourthe (Belgique). V: Bonnamour, L. (ur.): *Archéologie des fleuves et des rivières*, str. 25–27. Pariz, Éditions Errance.

Opomba: pri zbornikih konferenc, zborovanj, seminarjev itd. naj avtor ne navaja, za katero konferenco, zborovanje, seminar itd. gre, kje in kdaj je tovrstno druženje potekalo in kakšen je bil njegov naslov. Z ležečo pisavo je napisan naslov knjige, monografije, zbornika.

Prispevki v monografijah, ki izhajajo v seriji z lastnim naslovom

Svetličič, V. (1997): Drobne najdbe iz kovine, jantarja in roževine. V: Horvat, J.: *Sermin*. Opera Instituti Archaeologici Sloveniae, 3, str. 31–38. Ljubljana, Založba ZRC.

Opomba: za naslovom knjige zapišemo tudi naslov serije in številko zvezka (če je zbirka oštevilčena). Oštevilčenje je vedno zapisano v arabskih številkah, tudi če so v knjigi rimske številke. Prav tako izpuščamo oznako za zvezek pred številko *(Band, Heft, Vol., No.)*.

Prispevki v periodičnih publikacijah

Delak Koželj, Z. (2008): Programski model delovanja etnologa konservatorja. *Varstvo spomenikov*, 44, str. 256–262.
Raban, A. (1992): Archaological Park for Divers at Sebastos and Other Submerged Remnants in Caesarea Maritima. *International Journal of Nautical Archaeology*, 21(1), str. 27–35.

Opomba: število 21 v oznaki 21(1) je letnik publikacije, 1 pa številka v posameznem letniku. Če publikacija nima številke (npr. če izide le ena publikacija v enem letniku), naj avtor napiše le letnik, vendar ne v oklepaju. Imena revij ni dovoljeno pisati z okrajšavami, napisana pa morajo biti z ležečo pisavo.

Gesla v enciklopedijah in leksikonih

Slovenski biografski leksikon, s. v. "Turner Pavel".
Ulčar, M. (1995): *Enciklopedija orožja: Orožje skozi sedem tisočletij*. Ljubljana, Državna založba Slovenije, s. v. "Enostrelne zadnjače".

Opomba: pri citiranju gesel razširjenih enciklopedij in leksikonov pišemo le naslov (ležeče) in pa izdajo, če jih je na voljo več, ni pa treba zapisati številka zvezkov niti kraja in leta izida. Naslovu sledita kratica s. v. (iz latinskega *sub verbo* – pod besedo) ter citirano geslo v narekovajih in pokončnem tisku.
Kadar navajamo podatke iz manj znanega leksikona ali enciklopedije, moramo seveda v opombo zapisati vse podatke, ki jih pišemo pri monografskih delih.

Prispevki v dnevnih časopisih

Petkovšek, J. (2009): Potrebujemo zakon, ne le odlok. *Delo*, 51(24), 30. 1. 2009, str. 9.

Zakoni

Zakon o varstvu kulturne dediščine. Uradni list RS, št. 16/2008. Ljubljana.

Publikacije, katerih avtor in urednik nista znana – npr. statistični viri, enciklopedije, zemljevidi

Statistični urad Republike Slovenije (2007): *Statistični letopis 2007*. Ljubljana.

Opomba: najprej je naveden izdajatelj, sledijo leto izdaje, naslov dela in kraj izdaje. V prispevkih v angleškem jeziku morata biti v tem primeru ime izdajatelja in naslov dela prevedena v angleščino.

Rokopisi in tipkopisi, ki niso objavljeni, vendar je letnica nastanka znana

Plesničar – Gec, L. (2000): *Emonski teater*. Tipkopis.

Opomba: najprej je naveden avtor rokopisa/tipkopisa, sledijo letnica in naslov ter podatek, da gre za rokopis/tipkopis.

Rokopisi in tipkopisi, ki niso objavljeni, letnica nastanka pa tudi ni znana

Snoj, D. (1999): *Poročilo o zaščitnih izkopavanjih na lokaciji NUK II*. Tipkopis (prejeto 24. 1. 1999).

Opomba: najprej je neveden avtor rokopisa/tipkopisa, sledijo letnica (kot letnica se navede leto, ko je avtor prispevka vir prejel), naslov, podatek, da gre za rokopis/tipkopis, v oklepaju pa je natančen datum prejetja dela.

Intervjuji, pogovori

Svetina, T. (1995): *Marijina kapelica na Mlinem pri Bledu* (osebni vir 25. 3. 1995).

Opomba: navedejo se intervjuvanec, leto intervjuja, kot naslov pa vsebina intervjuja. V oklepaju je natančen datum izvedbe intervjuja/pogovora.

Splošne opombe

- Če je delo še v tisku, se v oklepaju namesto letnice izdaje navede: (v tisku) – na ta način se delo navaja tudi med besedilom.
- Če je krajev izdaj več, mora avtor navesti enega od njih.
- Če je založnik fakulteta ali oddelek na fakulteti, je treba za krajem izdaje dela najprej navesti univerzo, nato fakulteto in na koncu morebitni oddelek.
- Če sta avtorja dva ali jih je več, se v končnem seznamu virov in literature navedba dela začne vedno s tistim avtorjem, ki je (kot prvi) naveden tudi med besedilom.
- Če isti avtor nastopa enkrat samostojno, enkrat pa kot prvi avtor v skupini več avtorjev, potem v seznamu virov in literature najprej navajamo njegova samostojna in nato skupinska dela; slednja razvrstimo po abecedi glede na priimek drugega (ali po potrebi tretjega) avtorja. Če se isti avtor pojavi večkrat, dela navajamo po letu izdaje – najprej starejša in nato novejša dela.
- Če je naslov citiranega dela v dveh ali več jezikih ali če je celotni prispevek v dveh ali več jezikih, mora avtor za prvo napisanim naslovom zapisati še naslove dela v drugem(–ih) jeziku(–ih), in sicer znotraj oglatih oklepajev. Če je teh naslov več, jih mora med seboj ločiti s poševno črto (/), pri čemer pred njo in za njo ne sme pustiti presledka. Če je dvo- ali večjezični prispevek v publikaciji objavljen na različnih mestih, morajo biti številke strani navedene za vsakega posebej, kot je prikazano v spodnjem primeru:
  Horvat, J. (2002): The Hoard of Roman Republican Weapons from Grad near Šmihel [Zaklad rimskega republikanskega orožja z Gradu pri Šmihelu pod Nanosom]. *Arheološki vestnik*, 53, str. 117–150 [150–192].
- Navedba strani se piše s stičnim pomišljajem; avtor naj bo pozoren, da uporablja pomišljaj (–) in ne vezaj (-).
- Vsaka navedba vira se konča s piko.

39. Pri navajanju arhivskih virov je treba v oklepaju navesti ime arhiva ali njegovo okrajšavo, ime fonda in njegovo signaturo, oznako tehnične enote (številko fascikla ali škatle) ter naslov in številko navajanega dokumenta, vse ločeno z vejicami. Poleg tega je – če je to mogoče – smiselno navesti še podatke, ki so na citirani arhivaliji, npr. številko in datum izdaje akta.

Primer navedbe arhivskega vira

Arhiv Republike Slovenije (ARS), Vicedomski urad za Kranjsko, AS 1, šk. 1, akt 942.

40. Vire s svetovnega spleta navajamo, kot je prikazano spodaj. Vedno na koncu navedemo tudi datum, ko je bil vir dostopen na spletu.

Primer navedbe spletnega vira, če je avtor znan

Avramov, D. (2006): Social exclusion and social security. http://www.avramov.org/documents/document7.pdf (dostop 20. 2. 2008).

Primer navedbe spletnega vira, če avtor ni znan

Internet 1: http://www.international.icomos.org/charters.htm (dostop 15. 9. 2008).

Opomba: v prvem primeru se med besedilom navede (Avramov, 2006), v drugem primeru pa (internet 1, 2 ...).

41. Seznam virov in literature vključuje le dela, ki so dejansko navedena v besedilu prispevka. Vsako enoto v teh seznamih zaključuje pika.

RECENZENTSKI POSTOPEK, LEKTURA IN AVTORSKE PRAVICE

42. Uredništvo sprejema prispevke vse leto. Prispevke morajo avtorji poslati po pošti na naslov uredništva

Zavod za varstvo kulturne dediščine Slovenije
Varstvo spomenikov – uredništvo
Poljanska cesta 40
SI–1000 Ljubljana

43. Grafične priloge morajo biti v končni obliki shranjene v podatkovni mapi, ločeno od besedila prispevka. Gradiva ne pošiljajte po e–pošti, ampak ga zapišite na zgoščenko. Zgoščenki priložite iztis vseh datotek.
44. Uredništvo ima pravico, da prispevkov, ki niso v celoti pripravljeni v skladu z navodili za objavo v reviji Varstvo spomenikov, ne sprejme v recenzentski postopek.
45. Uredništvo ima pravico, da prispevkov, ki niso napisani v slovenskem knjižnem jeziku, ne sprejme v recenzentski postopek.
46. Z rezultatom recenzije članka bo avtor seznanjen najpozneje v treh mesecih od oddaje članka. Če recenzent predlaga spremembe oziroma izboljšave, se članek vrne (prvonapisanemu) avtorju. Morebitne popravke ali spremembe lahko sočasno predlaga tudi uredništvo. Avtor vnese predlagane recenzentove in/ali urednikove popravke in vrne popravljeno besedilo v petih dneh. Vnesene popravke in spremembe preveri urednik. Dovoljeni so le popravki in spremembe, ki jih zahtevata recenzent in/ali urednik.
47. Če recenzija ne zahteva popravka ali dopolnitve članka, se avtorju recenzija ne pošlje. V tem primeru uredništvo pošlje (prvemu) avtorju le obvestilo, da bo prispevek objavljen.
48. O uvrstitvi objavljenih prispevkov v eno od tipologij dokumentov/del v bibliografskem sistemu COBISS odloča recenzent. Urednik preveri pravilnost odločitve recenzenta. Če se mu zdi recenzentova uvrstitev sporna, se glede uvrstitve dogovorita skupaj. O uvrstitvi nerecenziranih prispevkov v eno od tipologij COBISS–a odloča urednik.
49. Pred objavo so vsi prispevki, ki so napisani in oddani v slovenskem jeziku, še lektorirani. Avtorju se lektorirano besedilo pošlje v dopolnitev le, če lektor predlaga večje popravke oziroma vstavi svoje komentarje/pripombe, ki so povezani s strokovno vsebino. V takih primerih avtor popravi ali izboljša besedilo v skladu z lektorjevimi pripombami/komentarji in vrne popravljeno besedilo v treh dneh.
50. Prevod se opravi po recenzentskem postopku oziroma po vnosu morebitnih recenzentovih in/ali urednikovih popravkov in pregledu morebitnih predlaganih večjih lektorjevih popravkov oziroma komentarjev/pripomb.

    Za zagotovitev brezhibnosti prevoda prevedene prispevke pred objavo pregleda oseba, ki uporablja angleščino kot svojo materinščino. Če so predlagani manjši popravki, se prevod avtorju ne vrača, ampak uredništvo vnese popravke na podlagi predlogov govorca materinščine. Če je ugotovljeno, da je prevod jezikovno problematičen, uredništvo poskrbi za njegovo profesionalno lektoriranje. Avtor vrne lektorirano besedilo prevoda v petih dneh. Dopolnjeno besedilo prevoda se še enkrat jezikovno pregleda. Prispevek je objavljen, ko je potrjeno, da prevod ustreza pravopisnim pravilom angleškega jezika in pravilom v teh navodilih.
51. Tuji avtorji se za prevod prispevkov iz angleščine v slovenščino dogovorijo z urednikom. Prispevek morajo oddati v brezhibni angleščini. Tudi te prispevke jezikovno pregleda oseba, ki uporablja angleščino kot svojo materinščino.
52. Uredniški odbor lahko na predlog urednika ali recenzenta zavrne objavo prispevka.
53. Sprejeti bodo samo prispevki, ki še niso bili objavljeni. Če je isti prispevek že v postopku objave v drugi reviji, mora avtor to izrecno navesti.
54. Za avtorsko delo, poslano za objavo v Varstvu spomenikov, vse moralne avtorske pravice pripadajo avtorju, materialne avtorske pravice reproduciranja in distribuiranja v Republiki Sloveniji in v drugih državah pa avtor brezplačno, enkrat za vselej, za vse primere, za neomejene naklade in za vse medije neizključno prenese na izdajatelja.
55. Avtorji so za objavo grafičnih prilog, za katere nimajo avtorskih pravic, dolžni pridobiti dovoljenje in ga poslati na naslov uredništva.
56. Za vse trditve v prispevku odgovarja avtor sam, zato objavljamo le podpisane prispevke.
57. Ob izidu prejme vsak avtor članka in vsak recenzent en brezplačen izvod publikacije. Članki niso honorirani.

Instructions to authors for the drafting of articles in *Varstvo spomenikov*

PRESENTATION

1. *Varstvo spomenikov* is Slovenia's main academic and professional journal devoted to the theory and practice of monument protection. It is published by the Institute for the Protection of Cultural Heritage of Slovenia.
2. The journal first appeared in 1946, with one issue published a year up to 2010.
3. The journal is divided into two parts. The first (longer) part contains articles classified according to the COBISS (**Co**–operative **O**nline **Bi**bliographic **S**ystem and **S**ervices) typology under codes 1.01 to 1.04, where 1.01 means original scientific article, 1.02 means review article, 1.03 means short scientific article and 1.04 means professional article. The articles published in this part of the journal are peer–reviewed and are counted as reference articles in domestic and foreign academic environments. The category of the article is proposed by the author but the final decision is taken by the editorial board on the basis of the reviewer's proposal.

   The second (shorter) part, which follows the first, contains reviews (COBISS code 1.19), presentations (of books, projects, events, lectures, conferences, etc.), library information, etc. Articles published in this part of the journal are not subject to peer review. The first part of the journal is called *Razprave* [Papers] and the second *Predstavitve* [Presentations]

TYPE, LENGTH AND STRUCTURE OF ARTICLES

4. The individual issues of the journal are not as a rule thematically oriented. The journal publishes articles from various fields and disciplines (archaeology, ethnology, history of art, architecture, landscape architecture, conservation, restoration, geography, etc.) which follow the scholarly and professional interest of their authors in the protection, research and management of cultural heritage, international acts and national legislation, spatial planning and information technology in the monument protection field, Conservation studies, monument protection history and doctrine, etc.
5. Articles in the *Razprave* section are published in Slovene and English. As a rule translations are arranged by the editorial office.
6. Papers should not exceed 24 pages (30 lines, 64 characters per line) or 46,000 characters with spaces. Articles from the *Predstavitve* section should not exceed 5 pages (9,300 characters).
7. The contents of papers should follow this sequence: title, subtitle (where appropriate), abstract, keywords, text divided into individual chapters (including an introduction and conclusion), list of references and summary. The title and subtitle of the article should accurately but concisely indicate the essential content. As a rule, the most important concepts dealt with in the article should be indicated at the start of the title or subtitle. The maximum recommended length of titles is 140 characters. The abstract should be no more than 6–10 lines long (up to 650 characters). It must be self–explanatory and intelligible to someone who has not read the whole article; it should contain an outline of the methodology used and results obtained; whole sentences should be used and little–known abbreviations should be avoided. Abbreviations should be explained in Slovene at first use. If this is not possible, the abbreviation should be explained in the language in which it originates. Keywords should consist of 3–8 words indicating the content of the article; these should be simple expressions in the nominative singular case. The author should attempt to select keywords that are already in general use in the COBISS system. The UDC call number or classification shall be provided by the editorial office. The summary should be 30–45 lines long (maximum 1,900 characters). In it, the author shall define the purposes, main characteristics and methodology of the research work and the most important results and conclusions of the article. The text of the article must be clearly and intelligibly structured with titles of sections and subsections. A maximum of two levels of subsections (subsections and sub–subsections) are permitted. The author may also include a short acknowledgements section which will be published before the list of references.
8. In order to guarantee anonymity during the peer–review process, the name(s) of the author(s) should only appear on a separate cover page. Titles and degrees should be included. Official abbreviations should be used for degrees but titles are not abbreviated. Female authors should use the female form of their title (e.g. *docentka*). The cover page should also state the address of the institution where the author is employed (or other appropriate address) and an e–mail address. If the article is the work of more than one author, the authors themselves shall determine the order in which their names appear. The cover page should not contain other information.
9. For book presentations and reviews (COBISS code 1.19) published in the second part of the journal, the author must first indicate the title of the article. This does not necessarily have to be the same as the title of the book or work which the author is presenting or reviewing but must relate to the content/review of the presented work or book and should be as brief and uncomplicated as possible. Following the title, the author must also indicate: the original title of the work, the name of the author(s), the name of the editor(s), the publisher and the year of publication, and the ISBN number.

FORMATTING AND LANGUAGE OF ARTICLES

10. Articles must be written in Microsoft Word format. Only one style should be used throughout the article – the default Normal style. This means that articles must have the following characteristics: line spacing: single; font: Times New Roman; font size: 12 pt; alignment: left; margins: 2.5 cm; A4 format. These rules change slightly in the case of illustrations and tables, where the font must be Arial and the font size must not be smaller than 10 pt. The pages of the article should be numbered in sequence and the page number should appear at the bottom of the page (centred).
11. The text of the article should use simple formatting. The use of indentations, hyphenation, underlining, shading or any other forms of formatting except the use of bold and italics is not permitted. The entire text should be lower–case (with the exception of initial capitals) and should contain no unnecessary abbreviations. If abbreviations cannot be avoided, the author should explain them at first use.
12. The author may include original expressions/terms alongside expressions translated into Slovene. The author should include the expression in brackets after the Slovene translation, following an abbreviation indicating the language of the original expression/term (e.g. Eng. for English, Ger. for German, Fr. for French, etc.) and then the expression/term in italics. The Slovene translation of the expression/term should be placed in inverted commas.
13. Do not use the automatic bullets and numbering functions in Microsoft Word to list items. Items in a list should be numbered or marked manually even though this means that the text will not be aligned vertically. The same applies to numbering the title, subtitle, sections, subsections, tables and figures. If numbers are not used to indicate the items in a list, dashes should be used instead.
14. Articles published in Slovene must be written in standard literary Slovene and observe the rules of Slovene usage as set out in *Slovenski pravopis* (2003, 2007).
15. The use of foreign words in articles written in Slovene is only permitted if a more suitable expression does not exist in Slovene.

TABLES AND ILLUSTRATIONS

16. Tables in the article shall be referred to (in articles written in Slovene) by the expression *preglednica*. Tables are incorporated into the text of the article and must not extend beyond the 2.5–centimetre margin. Each table must be intelligible, clear and simple, without additional explanation or description. Tables should consist of rows and columns intersecting in cells. Cells should not be shaded. Tables must be numbered in sequence with Arabic numerals and must have titles. The title of the table should appear above the table. The number and title of the table should be separated by a colon. Titles of tables should be as short and simple as possible. The title of a table should only end with a full stop if it is a full sentence. The

author must cite the sources of the data in the table below the table. The sources used must be listed (in full) in the list of references at the end of the article.

17. The uniform designation 'Figure' shall be used for all types of illustration (photographs, maps, graphs, sketches, etc.). Figures must not be embedded in the text of the article. They must be numbered in sequence with Arabic numerals and must have titles. The number and title should be separated by a colon. Titles of figures should be as short and simple as possible. The author shall also include the source(s) of the illustration in the manner set out in these instructions for in-text citation of sources and references. In the case of original photographs and illustrations not taken from sources, the name of the photographer/illustrator shall be given after the title of the figure. The title of the figure shall only end with a full stop placed after the citation of sources (or the name of the photographer/illustrator) in the case of a full sentence.
18. If the author refers in the text to a figure (describes it, comments on it, etc.) it must be stated in the text what figure the author is referring to; if a figure complements the text of the article, the figure complementing the text must be indicated at the most appropriate point in the text. When referring to figures in the text, their numbers should be used, e.g. '(Fig. 1)', 'as can be seen from Figure 1', 'as shown by Figure 1', etc.
19. If a figure consists of more than one image (e.g. a vertical and/or horizontal sequence of photographs, sketches, tables, etc.), each individual element of the figure must be visibly and clearly numbered. The caption to the figure must include the number of the individual element of the figure and the title/explanation of this element, in the manner indicated in the example below. Such a title shall end with a full stop.
20. If an illustration contains text (e.g. labels on sketches, legends on graphs, labels/textual indications of units on the X and Y axes of graphs, etc.), this text must be given in Slovene and English. Labels should be as simple and as short as possible (if labels or textual indications of units on the X and Y axes of graphs and elsewhere are long, it is better to label these units with numbers and explain the numbers in a legend).
21. The font used in all illustrations must be Arial and the font size must be no smaller than 10 pt. Single line spacing, left alignment and A4 format must be used.
22. Illustrations (with the exception of graphs) must be delivered as bitmap images with a resolution of at least 350 dpi (dots per inch), in JPEG (highest quality) or TIFF format. The width of an image at this resolution should be at least 14.8 cm. If authors are unable to submit illustrations in the prescribed form, they should consult the editor before submission.
23. Graphs must be in Microsoft Excel format.
24. Each illustration must be saved and submitted to the editorial office in its own file. The filename of an individual image file must have the following format: surname of (first) author, underscore, abbreviation 'sl', underscore, number of the figure in the text, e.g. **Fister_sl_1**.
25. The author should count the space that the illustration will occupy in the article as an amount of text, in other words 250 words (half a page) or 500 words (whole page).
26. Authors should be moderate in their use of illustrations in the article. They should only use those they consider necessary to aid understanding of the content of the article.

NUMBERS AND MEASUREMENTS

27. Metric measurements should be used. In the case of numbers greater than 9999, commas should be used to separate thousands and millions (for example 13,432 or 1,514,800). When giving the scale of a map, a space should be used either side of the colon (for example 1 : 500,000). Numbers and units are separated by a space (for example 135 m, but 23.5‰), but a space is not used before superscripts or subscripts indicating powers or indices (for example 143 km^2, b_5, 17 °C). Symbols in mathematical operations are separated by spaces, except brackets (e.g. p = a + c – b – (a + c : b).

ABBREVIATIONS

28. The Slovene versions of abbreviations and bibliographic references (ur.; idr.; isti.; ista; prav tam) shall be used in articles written in Slovene.

    The abbreviation 'prim.' (cf.) is used to draw attention to a view which differs from that of the author or from that of the author of another cited work.

NOTES AND REFERENCES

29. Bibliographic references shall be given in the text. Explanatory notes shall be given as footnotes.

    Footnotes containing additional text by the author shall be numbered consecutively from the beginning to the end of the text. Footnotes should not be too long.
30. Where the cited author is known, the bibliographic reference in the text should be as follows: (Zadnikar, 1982: 20–23) or, for example, 'Zadnikar (1982) states that...' Where a cited work has two authors, both are cited: (Buser, Cajhen, 1980) or, for example, 'Buser and Cajhen (1980) consider that...' In the case of works by several authors, only the surname of the first author is given, and the abbreviation et al. (meaning 'and others') is used for the other authors: (Benedetti et al., 2004) or 'Benedetti et al. (2004) believe that...' If there are six or fewer authors, all six are cited in the list of references at the end of the article, in the manner specified in these instructions. If there are more than six authors, the list of references at the end of the article cites the first six authors and adds the abbreviation et al. for the others, as specified in these instructions. If the article uses multiple sources with the same initial authors, all the authors up to and including the first different author must be cited in the text.
31. Works by one author published in the same year must be distinguished by the addition of lowercase letters (a, b, c, d, etc.) closed up to the year of publication e.g. '(Božič, 1992a, 1992b)' or 'Božič (1992a, 1992b) mentions that...' This is also how they must be cited in the list of references at the end of the article. Works by different authors all of which relate to the same content should be cited in alphabetical order of the author surname, separated by semicolons: (Fister, 1987; Stopar, 1990; Zadnikar, 1975). When citing two or more works by the same author, cite the author and the years of publication of these works in chronological order, separated by a comma: (Zadnikar, 1982, 1988). If the text contains consecutive references to the same work, the abbreviation *ibid.* is used in the second and all subsequent consecutive references in the same paragraph. If a work is still in the process of being published, use the wording 'in press' in brackets instead of the date of publication – this is also the way to cite the work in the list of references at the end of the article.
32. Quotations should be placed inside single inverted commas. The page on which the quotation appears in the work is indicated after a colon. A full stop is placed as final punctuation after the bracket containing the source of the quotation. If the text of the quotation in the cited work is on two or more pages, an unspaced dash is placed between the page numbers (Zadnikar, 1982: 36–37).
33. Longer quotations (over 40 words) should be placed in a separate paragraph and written in italics. A blank line should be left before and after this paragraph. In this case inverted commas are not used to mark the start and finish of the quotation. A full stop is placed as final punctuation after the bracket containing the source of the quotation.
34. In the case of quotations in which words/sections are omitted, omissions are indicated by an ellipsis in square brackets: […]. This symbol is followed by a capital letter, unless only part of a sentence is omitted. If a capital letter does not appear at this point in the quoted work (e.g. because it is not the beginning of a sentence), the first letter is enclosed in square brackets.
35. In references to sources of which the author and editor are unknown, the name of the publisher (in articles in English the name of the publisher must in this case be translated into English) and the year of publication of the work are cited. For data published by the Statistics Office of the Republic of Slovenia, for example, the citation should be as follows: (Statistics Office of the Republic of Slovenia, 2007). Abbreviations may also be used for sources, e.g. SURS for the Statistics Office of the Republic of Slovenia, but the name of the source must first be given in full in the text of the article, followed by an explanation that from this point on an abbreviation, which must be specified, will be used for this source. For the above example (Statistics Office of the Republic of Slovenia, 2007), further references to it will use (SURS, 2007).
36. When citing laws in the text, the name of the law, the number of the Official Journal of the Republic of Slovenia and the year shall be given, where the abbreviation OJ RS shall be used for the Official Journal of the Republic of Slovenia, for example: (Cultural Heritage Protection Act, OJ RS, No 16/2008). When quoting directly from laws, the page number in the OJ RS is added.
37. If laws have official abbreviations, for example ZVKD-1, these may be used, but the name of the law must first be given in full in the text of the article, followed by an explanation that from this point on an abbreviation, which must be specified, will be used for this source.

LIST OF REFERENCES

38. All works (sources and references) cited in the article must be listed in alphabetical order at the end of the article in a section entitled References. The list of authors must not be numbered or otherwise labelled (with bullets, dashes, etc.). In the case of the citations shown below, the punctuation marks and font style (italic or regular) are given exactly as they must be given by the author in his/her article.

Monographs and books (single author)

Fister, P. (1986): *Umetnost stavbarstva na Slovenskem*. Ljubljana, Cankarjeva založba.

Note: Author's surname name, Author's initial(s). (year of publication): *Title: Subtitle if any.* Place of publication, Publisher.

Monographs and books (three to six authors)

Pernet, L., Carlevaro, E., Tori, L., Vietti, G., Della Casa, P., and Schmid-Sikimić, B. (2006): *La necropoli di Giubiasco (TI): Vol. II, Les Tombes de La Tène finale et d'époque romaine*, Collectio archaeologica 4. Zurich, Swiss National Museum.

Note: If there are six or fewer authors, all authors are listed in the list of references. If there are more than six authors, the first six are given and then the abbreviation 'et al.'

Monographs and books (authors not known, editor known)

Dromgoole, S. (ed.) (2006): *Legal Protection of the Underwater Cultural Heritage: National Perspectives in Light of the UNESCO Convention 2001*. Leiden, Martinus Nijhoff.

Undergraduate theses, master's theses, doctoral dissertations, research reports

Uhač, M. (2003): *Brodolom na rtu Savudrija*. Undergraduate thesis. University of Zadar.
Verbič, T. (2008): *Poročilo o ogledu arheoloških izkopavanj na lokaciji NUK 2*. Research report. Ljubljana, Zavod za varstvo kulturne dediščine Slovenije, Območna enota Ljubljana.

Papers or chapters in monographs, books, encyclopaedias and proceedings of conferences, conventions, seminars, etc.

Dumont, A. (2000): Etat d'un cours d'eau à la fin du 18e siècle : la visite de la rivière d'Ourthe (Belgique). In: Bonnamour, L. (ed.): *Archéologie des fleuves et des rivières*, 25–27. Paris, Éditions Errance.

Note: In the case of proceedings of conferences, conventions, seminars, etc., the author does not state the name of the conference, convention, seminar, etc. or where and when it took place. The title of the book, monograph or proceedings is given in italics.

Papers in monographs published in a series with its own title

Svetličič, V. (1997): Drobne najdbe iz kovine, jantarja in roževine. In: Horvat, J.: *Sermin*. Opera Instituti Archaeologici Sloveniae, 3, 31–38. Ljubljana, Založba ZRC.

Note: the title of the book is followed by the title of the series and the number of the volume (if the collection is numbered). Numbering is always given in Arabic numerals even if Roman numerals are used in the book. The volume designation (*Band, Heft, Vol., No* etc.) before the number is also omitted.

Articles in periodicals

Delak Koželj, Z. (2008): Programski model delovanja etnologa konservatorja. *Varstvo spomenikov*, 44, 256–262.
Raban, A. (1992): Archaological Park for Divers at Sebastos and Other Submerged Remnants in Caesarea Maritima. International Journal of Nautical Archaeology, 21(1), 27–35.

Note: the numeral 21 in 21(1) refers to the year of publication while the numeral 1 is the number of the issue in that year. If the publication does not have an issue number (for example a single annual publication), the author merely gives the number referring to the year of publication, but not in brackets. Names of publications must not be given in abbreviated form and must be given in italics.

Entries in encyclopaedias and lexicons

Slovenski biografski leksikon, s. v. 'Turner Pavel'.
Ulčar, M. (1995): *Enciklopedija orožja: Orožje skozi sedem tisočletij.* Ljubljana, Državna založba Slovenije, s. v. 'Enostrelne zadnjače'.

Note: when citing entries from well-known encyclopaedias and lexicons, only the title (in italics) and the edition (in the case of there being more than one) are given. It is not necessary to state the volume number or the place and year of publication. The title is followed by the abbreviation s.v. (from the Latin *sub verbo* meaning under the word or heading) and the cited entry in inverted commas. Italics are not used for the cited entry.
When citing information from a less well-known lexicon or encyclopaedia, the reference must of course include all the information given in the case of monographic works.

Articles in daily newspapers

Petkovšek, J. (2009): Potrebujemo zakon, ne le odlok. *Delo*, 51(24), 30. 1. 2009, 9.

Laws

Protection of Cultural Heritage Act. OJ RS, No 16/2008. Ljubljana.

Publications of which the author and editor are unknown – for example statistical sources, encyclopaedias, atlases

Statistics Office of the Republic of Slovenia (2007): *Statistični letopis 2007*. Ljubljana.

Note: the publisher is given first, followed by the year of publication, the title of the work and the place of publication. In articles in English, the name of the publisher and the title of the work must be translated into English in this case.

Unpublished manuscripts and typescripts of which the date of writing is known

Plesničar-Gec, L. (2000): *Emonski teater*. Typescript.

Note: the name of the author of the manuscript/typescript is given first, followed by the date of writing, the title and an indication that it is a manuscript/typescript.

Unpublished manuscripts and typescripts of which the date of writing is not known

Snoj, D. (1999): *Poročilo o zaščitnih izkopavanjih na lokaciji NUK II*. Typescript (received 24. 1. 1999).

Note: the name of the author of the manuscript/typescript is given first, followed by the date (in this case the year that the author of the article received the source), the title, an indication that it is a manuscript/typescript, and in brackets are the exact date on which the work was received.

Interviews, conversations

Svetina, T. (1995): *Marijina kapelica na Mlinem pri Bledu* (personal source 25. 3. 1995).

Note: the reference consists of the name of the interviewee, the year of the interview and, as a title, the content of the interview. The exact date of the interview/conversation is given in brackets.

General remarks

- If a work is still in the process of being published, use the wording 'in press' in brackets instead of the year of publication – this is also the way to cite the work in the text.
- If there is more than one place of publication, the author must cite at least one of them.
- If the publisher is a university faculty or a department thereof, following the place of publication the name of the university must be given first, followed by the faculty and then the department if applicable.
- If there are two or more authors, the reference in the list of references at the end of the article always starts with the author cited (first) in the text.
- If the same author appears both as the sole author of a work and as the first author in a group of authors, the works of which he/she is sole author appear before the group works in the list of references; the latter are arranged alphabetically by the surname of the second author (or if necessary the third). If the same author appears several times, works are cited by year of publication – starting with the oldest.
- If the title of a cited work is in two or more languages, or if the entire article is in two or more languages, the author must add the titles of the work in the other language (or other languages) in square brackets after the title in the first language. If there are several of these titles, they must be separated by a slash (/) without spaces. If a bilingual or multilingual article in a publication is published in more than one place, the page numbers must be given for each separately, as shown in the example below:
  Horvat, J. (2002): The Hoard of Roman Republican Weapons from Grad near Šmihel [Zaklad rimskega republikanskega orožja z Gradu pri Šmihelu pod Nanosom]. *Arheološki vestnik*, 53, 117–150 [150–192].
- Page numbers are separated by an unspaced dash; authors should be careful to use a dash (–) and not a hyphen (-).
- Every reference must end with a full stop.

39. When citing archive sources it is necessary to give the name of the archive

or an abbreviation thereof, the name of the collection and its call number, the number of the unit (folder or box) and the title and number of the cited document, all separated by commas. It is also a good idea to cite, where possible, details that appear on the cited archive material, for example the number and date of publication of a document.

Example of a reference to an archive source

Arhiv Republike Slovenije (ARS), Vicedomski urad za Kranjsko, AS 1, Box 1, Document 942.

40. Internet sources are cited as shown below. The reference should always end with the date of retrieval (the date on which the source was accessed on the web).

Example of a reference to an internet source where the author is known

Avramov, D. (2006): Social exclusion and social security. http://www.avramov.org/documents/document7.pdf (retrieved on 20. 2. 2008).

Example of a reference to an internet source where the author is not known

Internet 1: http://www.international.icomos.org/charters.htm (retrieved on 15. 9. 2008).

Note: in the first case the in-text citation will be: (Avramov, 2006); and in the second case (internet 1, 2...).

41. The list of references should only include works that are actually cited in the text of the article. Each item in these lists is concluded by a full stop.

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Varstvo spomenikov – Editorial office
Poljanska cesta 40
SI-1000 Ljubljana

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