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O znanosti pisanja

Vsakdo, ki se je kdaj lotil pisanja znanstvenega članka, pozna tisti neopisljivi občutek, ko zreš v prazno stran, tik preden zapišeš prvo besedo. Ta prva beseda je hkrati prvi korak na dolgi poti do objave.

Pisanje je ustvarjanje, ne glede na to, kaj pišemo. Tudi pisanje znanstvenih člankov je ustvarjalni proces, in ne le rutina, čeprav ima svoje zahteve in pravila. Nekateri avtorji imajo pragmatičen pristop, več kilometrine ali preprosto talent ter jim besede same zdrsnejo po papirju, drugi pa ob misli, da je treba po končani raziskavi napisati še članek, ki bo prinesel nujne točke za znanstvene objave, otrpnejo in preložijo pisanje na boljše čase.

Pisanje znanstvenih člankov nam precej olajšajo pravila. Najbolj temeljno med njimi je splošno veljavna in logična struktura IMRAD (ang. *Introduction, Method, Research, Discussion*), najprej uvod, potem predstavitev metod in raziskave, razprava in sklep. Ta struktura je osnovna in se smiselno prilagaja vsebini in vrsti članka. Potem so tu podrobnejša navodila, ki veljajo za posamezno znanstveno revijo. Ta omejujejo število besed, natančneje predpisujejo zgradbo, oblikovanje, jezik in navajanje virov. Tudi revija Urbani izziv ima takšna navodila za avtorje, so precej podrobna in obsežna, a lahko rešijo skoraj vsako dilemo pri zasnovi in oblikovanju članka. Avtorji, ki se pri pisanju opremijo z navodili izbrane revije, imajo tako okvir, v katerem lahko predstavijo svoje raziskovalno delo in rezultate.

Vsekakor pa je vsebina pomembnejša od oblike. Zakaj pišemo znanstvene članke? Pravi odgovor bi moral biti, zato, da širimo znanje. To je najboljša usmeritev, ko se lotimo pisanja.

Mnogo člankov je že bilo napisanih tudi na temo pisanja znanstvenih člankov. Andrade (2011) na primer je v svojem članku razčlenil pisanje dobrega povzetka kot zelo pomembnega dela članka, ki je večinoma edini del, ki ga bralci preberejo. Povzetek pa preberejo le, če jih predtem premami naslov članka. Skozi uvod in razpravo se prebijejo le nekateri, le zelo predani ali tisti, ki raziskujejo neko temo, preberejo celoten članek. Zato mora biti povzetek reprezentativen, podati mora ozadje študije, metodo, rezultate in sklep, vse to objektivno in jedrnato, v predpisanem številu

besed. Kako napisati znanstveni članek, sta opisala Hoogenboom in Manske (2012), uspešno pisanje znanstvenih člankov je zanju proces, ki ga lahko z upoštevanjem predlaganih usmeritev in izogibanjem običajnim napakam uspešno usvoji vsakdo. Avtorja navajata koristne napotke, kot so lastnosti člankov, zaradi katerih jih uredniki in recenzenti sprejmejo v objavo, in najpomembnejših pet razlogov, zaradi katerih članke zavračajo. Dotakneta se tudi etike znanstvenega pisanja, vključno z jasnim podajanjem rezultatov brez zavajanja, pravilnim citiranjem in izogibanjem plagiatorstvu. Še malo širše – kako napisati članek za uspešno objavo – so svoj prispevek zastavili Tress idr., ki začnejo z ugotovitvijo, da je »objavljanje sestavni del raziskovanja; če raziskava še ni bila objavljena, potem še ni končana« (2014: 17). V nadaljevanju opišejo vse korake procesa, od izbire soavtorjev in ciljne revije, pisanja članka do spodbudnega nasveta, da ne smete obupati, če je vaš članek kdaj zavrnjen.

Če na pisanje dejansko gledamo kot na proces z logično strukturo in potekom, ki je večinoma linearen, lahko pa vsebuje še kakšno povratno zanko, ima vsak korak svoj smisel in s prakso se ne samo priučimo obrti, temveč v pisanju najdemo tudi zadovoljstvo.

Ker so dobri članki ključni za dobro revijo, vas v uredništvu Urbanega izziva vabimo k oddaji prispevkov in vam bomo po najboljših močeh pomagali na poti do njihove objave.

Upam, da bodo članki, objavljeni v tej številki, avtorjem v zadovoljstvo, bralcem pa nudili prijetno in poučno branje!

Damjana Gantar,
glavna urednica

Viri

Andrade, C. (2011): How to write a good abstract for a scientific paper or conference presentation. *Indian Journal of Psychiatry*, 52(2), str. 172–175. DOI: 10.4103/0019-5545.82558

Hoogenboom, B. J., in Manske, R. C. (2012): How to write a scientific article. *International Journal of Sports Physical Therapy*, 7(5), str. 512–517.

Tress, G., Tress, B., in Saunders, D. A. (2014): How to write a paper for successful publication in an international peer-reviewed journal. *Pacific Conservation Biology*, 20(1), str. 17–24. DOI: 10.1071/PC140017

The science of writing

Anyone that has ever decided to write a research article is familiar with that indescribable feeling of staring at a blank page right before typing the first word. That first word is also the first step on the long journey to publication.

Writing is creating, regardless of what we are writing. Writing research articles is also a creative process, and not merely a routine, even though it has its own requirements and rules. Some authors have a pragmatic approach to writing or simply more experience or talent, and so they just sit down and write out what they have to. On the other hand, just thinking about the fact that they need to write an article after completing their research to earn vital points for research publications makes some people freeze up, and so they put off their writing until a better time.

Rules can make writing research articles considerably easier. The most fundamental among these is the logical and widely applied IMRAD (Introduction, Method, Research, and Discussion) structure, which is the most basic organizational structure that can be logically adapted to the article's content and type. Then there are the detailed instructions provided by each research journal, which restrict the number of words used and specify in detail the article's structure, formatting, language, and citation method. The journal *Urbani izziv* also uses such instructions for authors; they are quite detailed and extensive, but they can resolve practically any question related to designing and formatting the article. The authors that use the instructions of the selected journal thus have a framework in which they can present their research and its results.

However, content is even more important than form. Why do we write research articles? The right answer should be "to share new insights". This should be our guideline when we start writing.

Many articles have also been written on how to write research articles. For example, Andrade (2011) discussed how to write a good abstract, which is a very important part of an article and usually the only part that people actually read. People only read the abstract if their attention is first caught by the article's title. Only some continue by reading the introduction and discussion, and only the most dedicated or those researching a specific topic read the entire article. Therefore, the abstract must be representative, and it must convey the research background, method, results, and conclusion – all in an objective and concise manner, and within the prescri-

bed number of words. Hoogenboom and Manske (2012) described how to write a research article, characterizing the successful production of research articles as a process that anyone can master by following the guidelines suggested and avoiding common mistakes. The authors provide useful tips, such as what criteria make editors and reviewers accept manuscripts for publication and the top five reasons why they reject them. They also touch on the ethics of scholarly writing, including clear communication of findings without misleading the reader, proper citation, and avoiding plagiarism. An even broader perspective on how to write an article for successful publication was applied by Tress et al., who begin their study by arguing that "publishing is an inherent part of research; if research has not been published, it has not been completed" (2014: 17). They continue by describing all the steps of the writing process, from selecting co-authors and the target journal to how to write the article and an encouraging piece of advice that you should not give up if your manuscript is rejected.

If writing is in fact regarded as a process with a logical structure and course (which is mostly linear but may also include looping back once or twice), every step makes sense. Moreover, with practice we not only learn the skill, but also find satisfaction in it.

Because good articles are vital for a good journal, the *Urbani izziv* editorial board encourages you to submit your articles, and we will do our best to help you publish them.

I believe the articles published in this issue will give their authors satisfaction and will also offer a pleasant and educational read to our readers.

Damjana Gantar,
editor-in-chief

References

Andrade, C. (2011) How to write a good abstract for a scientific paper or conference presentation. *Indian Journal of Psychiatry*, 52(2), pp. 172–175. DOI: 10.4103/0019-5545.82558

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Urška SMRKE
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Vprašalniki zadovoljstva z bivalnim okoljem: sistematični pregled

Zadovoljstvo z bivalnim okoljem je bila v zadnjih desetletjih temeljito raziskovana tema, saj lahko ponudi pomemben vpogled v kakovost bivalnega okolja. Vendar na tem področju še vedno ostaja veliko neodgovorjenih vprašanj in neskladnosti med izsledki raziskav. Ker na razumevanje katerega koli področja znanstvenega raziskovanja pomembno vpliva kakovost metodologije in uporabljenih merskih instrumentov, je namen tega članka pregled trenutnega stanja razvoja in psihometričnih značilnosti najpogosteje uporabljenih metod merjenja zadovoljstva z bivalnim okoljem, in sicer samoocenjevalnih vprašalnikov, ki izhajajo iz pristopa merjenja splošnega zadovoljstva z bivalnim okoljem na podlagi ocenjevanja zadovoljstva s posameznimi vidiki bivalnega okolja. Iz pregleda študij je razvidno splošno pomanjkanje ustrezno razvitih vprašalnikov s preverjeno veljavnostjo, pomanjkljivo poročanje o izvoru, razvoju in psihometričnih značilnostih uporabljenih vprašalnikov ter pogosto pomanjkljivo vlaganje v razvoj in preverjanje veljavnosti vprašalnikov. Ta opažanja so pomembna predvsem za ocenjevanje kakovosti študij in implikacij glede zadovoljstva z bivalnim okoljem, ki izhajajo iz teh študij, poleg tega so to točke, v zvezi s katerimi bi bilo mogoče raziskovalno prakso izboljšati.

Ključne besede: zadovoljstvo z bivalnim okoljem, razvoj vprašalnikov, psihometrična evalvacija, pregled

1 Uvod

Raziskovanje zadovoljstva z bivalnim okoljem se že desetletja izvaja na področjih, kot so arhitekturno in urbanistično načrtovanje, geografija, sociologija in psihologija (Lu, 1999), v zadnjem času pa se raziskovalci za to področje znova bolj zanimajo, kar je prineslo nov razvoj in nove vpoglede vanj (Dekker idr., 2011; Aigbavboa in Thwala, 2016; Wang in Wang, 2016). Prepoznano je kot pomemben vidik zadovoljstva z življenjem, blagostanja in splošne kakovosti življenja (Lu, 1999; Wang in Wang, 2016) in učinkuje na način odzivanja posameznikov na lastno okolje, saj ponazarja subjektivno oceno bivalnega okolja (Lu, 1999). V širšem smislu je raziskovanje zadovoljstva z bivalnim okoljem pomembno, ker številne stanovanjske politike v več delih sveta kot enega svojih glavnih ciljev vključujejo izboljšanje zadovoljstva stanovalcev z lastnim bivalnim okoljem (Wang in Wang, 2016). Da bi te cilje dosegli, je potrebno razumevanje dejavnikov zadovoljstva z bivalnim okoljem (Aigbavboa in Thwala, 2016), za ocenjevanje doseganja teh ciljev pa je pomembno razumeti, ali so stanovalci zadovoljni s svojim bivalnim okoljem (Wang in Wang, 2016).

Za resnično razumevanje zadovoljstva z bivalnim okoljem, njegovih dejavnikov in implikacij mora to biti najprej ustrezno merjeno (Gifford, 2014). V zgodovini raziskovanja zadovoljstva z bivalnim okoljem se je to merjenje najpogosteje izvajalo z uporabo samoocenjevalnih vprašalnikov, ki sledijo enemu od dveh glavnih pristopov (glej Pinquart in Burmedi, 2003): merjenje zadovoljstva z bivalnim okoljem na podlagi enega ali več splošnih vprašanj o zadovoljstvu s celotnim bivalnim okoljem ali z njegovimi specifičnimi ravnmi (Lu, 1999; Li in Song, 2009; Dekker idr., 2011) ali ocenjevanje s spraševanjem respondentov o ravni zadovoljstva s specifičnimi vidiki ali komponentami bivalnega okolja (Wang in Wang, 2016), ki ga običajno povzamemo z indeksom zadovoljstva z bivalnim okoljem.

Čeprav se raziskovanje zadovoljstva z bivalnim okoljem že dolgo izvaja, nam ni znan še noben objavljen sistematični pregled vprašalnikov, uporabljenih v študijah zadovoljstva z bivalnim okoljem. V tem kvalitativnem preglednem članku se bomo osredotočili na pregled psihometrične kakovosti vprašalnikov, namenjenih ocenjevanju zadovoljstva z bivalnim okoljem, natančneje, na psihometrično evalvacijo vprašalnikov, ki sledijo pristopu merjenja zadovoljstva z naborom vidikov bivalnega okolja.

1.1 Pregled literature

Zadovoljstvo z bivalnim okoljem je večdimenzionalni koncept, ki je že bil opredeljen v številnih teorijah in teoretičnih okvirih (npr. Amérigo in Aragonés, 1997; Parkes idr., 2002; Shin, 2016). Najpogosteje je opredeljen kot zaznavanje, kako bivalno okolje dejansko zadovolji posameznikove bivalne težnje (Lu, 1999), in tako pomeni posameznikove kognitivne odzive na bivalno okolje (Wang in Wang, 2016).

Zadovoljstvo z bivalnim okoljem lahko razdelimo v zadovoljstvo z bivališčem, zadovoljstvo s sosesko in splošno zadovoljstvo z območjem bivanja ali s skupnostjo (Pinquart in Burmedi, 2003), ki se običajno štejejo za ločene vidike zadovoljstva z bivalnim okoljem (Dekker idr., 2011), iz česar sledi, da so običajno ocenjevani in analizirani ločeno (Aigbavboa in Thwala, 2016). Kot sta izpostavili Buyseva in Millerjeva (2012), je večina raziskovanja na področju zadovoljstva z bivalnim okoljem osredotočena na le enega od teh treh ravni bivalnega okolja. Zadovoljstvo na ravni soseske je predmet najštevilnejšega dela raziskav, precej manj znanega pa je o zadovoljstvu na ravni bivališča (Aigbavboa in Thwala, 2016). Študij, ki bi hkrati ocenjevale več kot eno od teh ravni, je malo, kljub vse večjemu prepoznavanju medsebojne povezanosti teh ravni zadovoljstva z bivalnim okoljem in prekrivanju njihovih napovednikov (Parkes idr., 2002). Med ocenjevanjem zadovoljstva z bivalnim okoljem posameznik implicitno ocenjuje trenutne bivalne razmere glede na več kot eno raven (Galster in Hesser, 1981; Adriaanse, 2007), natančneje, medsebojna povezanost je očitna v ocenjevanju lastnih bivalnih razmer, ki z veliko verjetnostjo vključuje tudi njeno bližnjo okolico in celo odnose s sosedi (Lu, 1999; Aigbavboa in Thwala, 2016).

O konceptualizaciji, merjenju in dejavnikih zadovoljstva z bivalnim okoljem že obstaja obsežen nabor literature (npr. Lu, 1999; Dekker idr., 2011; Wang in Wang, 2016). Poseben interes je namenjen vprašanju, kateri vidiki bivalnega okolja napovedujejo (splošno) zadovoljstvo z bivalnim okoljem stanovalcev (Parkes idr., 2002). Dosedanje študije so razkrile nekaj pomembnih dejavnikov, in sicer stanovanjske razmere ter značilnosti soseske in gospodinjstva (npr. bližina sosesk in priložnosti za zaposlitev in rekreacijo, splošna podoba soseske, socioekonomska sestava stanovalcev, razpoložljivost storitev itd.; Wang in Wang, 2016). To temo je težko obravnavati, saj se študije zadovoljstva z bivalnim okoljem med seboj močno razlikujejo v številnih vidikih, npr. v značilnostih vzorca (od nacionalnih raziskav do raziskav posameznih sosesk) in v obsegu vključenih spremenljivk (Parkes idr., 2002). Pogosto tudi prikazujejo nasprotujoče si ugotovitve glede napovednikov zadovoljstva z bivalnim okoljem, npr. v nekaterih študijah so se strah pred kriminalom ali občutki varnosti izkazali kot pomembni napovedniki zadovoljstva s sosesko, v drugih študijah pa se je ugotovilo, da sta to manj pomembna napovednika v primerjavi z okoljskimi spremenljivkami, kot sta sončna svetloba in hrup (Parkes idr., 2002), podobno stanje je tudi

glede prenaseljenosti ali gostote prebivalstva v soseski (Wang in Wang, 2016).

V empiričnih ugotovitvah o zadovoljstvu z bivalnim okoljem je veliko neskladij in kot je izpostavil Lu (1999), je vsaj del teh neskladij mogoče pripisati pogosto različnim opredelitvam ključnih spremenljivk zadovoljstva z bivalnim okoljem med študijami, kar skupaj z razlikami v specifikacijah modelov in tipu zbranih podatkov preprečuje neposredno primerjanje rezultatov študij. Torej, »način merjenja zadovoljstva z bivalnim okoljem v empiričnih analizah je pomemben, saj neposredno učinkuje na ugotovitve študij« (Lu, 1999: 270).

Dva glavna pristopa merjenja zadovoljstva z bivalnim okoljem sta ocenjevanje splošnega zadovoljstva in ocenjevanje zadovoljstva z različnimi vidiki bivalnega okolja (Lu, 1999; Dekker idr., 2011; Wang in Wang, 2016). Za večino študij zadovoljstva z bivalnim okoljem se uporablja pristop posameznih kazalnikov (115 študij proti 47 študijam, v katerih se je uporabil pristop aditivnih lestvic, kot izhaja iz metaanalize Pinquarta in Burmedija, 2003), vendar merjenje zadovoljstva z bivalnim okoljem morda ni tako preprosto, kot je spraševanje stanovalcev, ali jim je njihovo stanovanje ali soseska všeč. Znano je, da se lahko zadovoljstvo stanovalca spreminja glede na številne dejavnike, na primer glede na standard primerjave, na podlagi katerega posamezniki odgovarjajo na vprašanja o zadovoljstvu z bivalnim okoljem, in med posameznimi vidiki okolja (npr. glede na lastnosti tega in način, kako stanovalec te lastnosti uporablja; Gifford, 2014; glej tudi Jansen, 2013, 2014, za razpravo o tem, zakaj se zadovoljstvo z bivalnim okoljem običajno izkaže za razmeroma visoko na podlagi številnih dejavnikov). Zato je malo verjetno, da bi lahko bilo le eno posamezno vprašanje o zadovoljstvu z bivalnim okoljem točna mera mnenj posameznikov o njihovem okolju (Parkes idr., 2002).

Drugi pristop, pristop merjenja odzivov na več postavk o raznih vidikih okolja, najpogosteje sledi pripravi seznama vidikov bivalnega okolja, ki so potencialno želeni ali se štejejo kot pomembni za stanovalce in zadovoljstvo z bivalnim okoljem, in spraševanju stanovalcev o zadovoljstvu z njimi ali o (ne)strinjanju s trditvami, ki izražajo stališča do teh vidikov, običajno na lestvici Likertovega tipa. Te ocene so sešte-te v aditivni indeks, ki pomeni skupno mero zadovoljstva z bivalnim okoljem (Lu, 1999; Adriaanse, 2007). Nekatere od glavnih potencialnih pasti v tem tipu merjenja vključujejo arbitrarnost, s katero so aditivne mere pogosto konstruirane, in to, da posamezniki posameznim vidikom svojega bivalnega okolja verjetno pripisujejo različne stopnje pomembnosti za svoje zadovoljstvo, kar je zelo težko dobro razumeti in kar zelo otežuje oblikovanje zanesljivih merskih instrumentov (Lu, 1999). Prav zato nekateri raziskovalci pozivajo proti uporabi tega tipa meritev in trdijo, da je splošna mera boljša izbira, saj se tem težavam v celoti izogne (npr. Lu, 1999). Čeprav je ta nasvet lahko utemeljen, se je treba zavedati, da bi mnenja stanovalcev o specifičnih vidikih njihovega okolja lahko ponudila pomembne vpoglede, npr. lahko razkrijejo, katere značilnosti sosesk imajo pozitivne ali negativne in večje ali manjše učinke na splošno zadovoljstvo z bivalnim okoljem (Adriaanse, 2007). Zato je velika omejitev študije, če je zadovoljstvo z bivalnim okoljem ocenjeno le s splošnim vprašanjem brez hkratnega osredotočanja na posamezne vidike bivalnega okolja (Buys in Miller, 2012), vse to seveda pod predpostavko, da raziskovanje ne temelji le na seznamih fizičnih in socialnih značilnosti, ki jih arbitrarno določi raziskovalec. To pogosto velja, saj primanjkuje meril za izbiro vidikov, ki naj bodo vključeni. Le manjšina študij namreč raziskuje odnos med zadovoljstvom s posameznimi vidiki in celotno, splošno oceno zadovoljstva z bivalnim okoljem (Adriaanse, 2007).

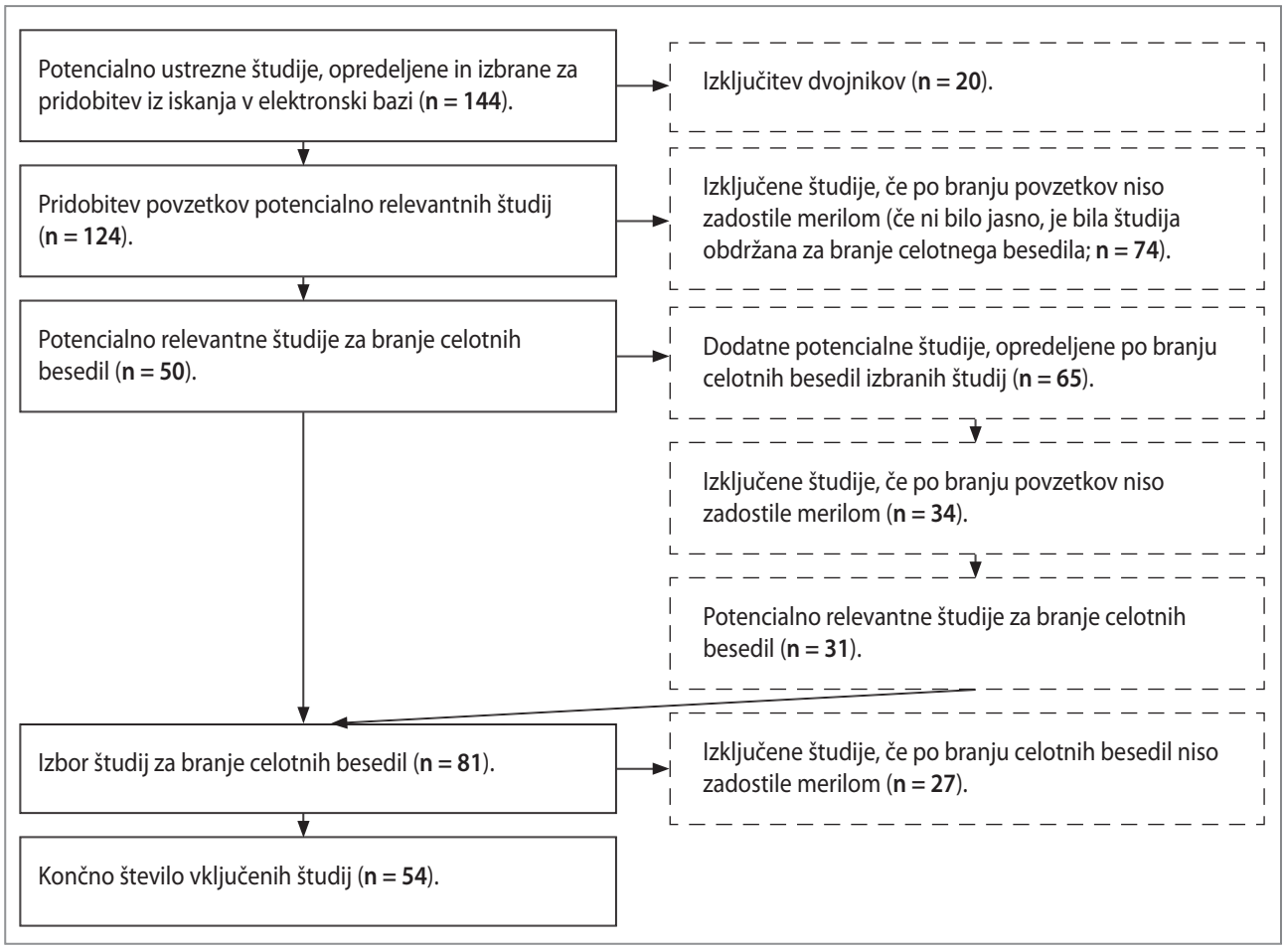
Ko se osredotočimo na protislovne ugotovitve v raziskovanju zadovoljstva z bivalnim okoljem in številna vprašanja, ki ostajajo odprta na področju ocenjevanja, se zastavi temeljno vprašanje primernosti in kakovosti merskih instrumentov, uporabljenih v raziskovanju zadovoljstva z bivalnim okoljem. Pomembnost tega vprašanja se kaže pri Furru in Bacharachu (2013: 2): »Če nekaj ni merjeno ali ni merjeno dobro, potem tega ni mogoče proučevati z znanstveno veljavnostjo. Če želite raziskovalne ugotovitve interpretirati smiselno in natančno, morate kritično proučiti podatke, ki ste jih zbrali v raziskavi.«

1.2 Raziskovalna vprašanja

Glavni cilj tega pregleda je ovrednotiti razvoj in psihometrične značilnosti vprašalnikov zadovoljstva z bivalnim okoljem, ki sledijo pristopu merjenja zadovoljstva na podlagi ocenjevanja mnenj o specifičnih vidikih bivalnega okolja in so osredotočena na zadovoljstvo z bivalnim okoljem na področju zadovoljstva z bivališčem oziroma s sosesko, ki ponazarjata najbolj osebno in neposredno domače okolje (Pinquart in Burmedi, 2003). Osredotočamo se na raziskovanje trenutnega stanja vprašalnikov, uporabljenih na področju zadovoljstva z bivalnim okoljem, in raziskovanje možnosti za izboljšanje obstoječih praks, ne pa na podajanje podrobne razprave o doseganju psihometričnih standardov za vsakega izmed vprašalnikov v zelo raznovrstni skupini teh.

Oblikovali smo dve specifični raziskovalni vprašanji:

1. Kateri vprašalniki se uporabljajo v raziskavah zadovoljstva z bivalnim okoljem? Ali raziskovalci uporabljajo že obstoječe lestvice, jih prirejajo na podlagi kakšne druge študije ali vprašalnika ali jih razvijajo za potrebe trenutne raziskave?
2. Kateri postopki so bili uporabljeni za ocenjevanje psihometričnih lastnosti (posplošljivost, notranja struktura in zunanja veljavnost) uporabljenih vprašalnikov?



Slika 1: Diagram poteka izbiranja študij za vključitev v pregled

2 Metoda

Glede na raziskovalna vprašanja smo oblikovali merila za vključitev in izključitev študij, namenjenih za pregled. Za vključitev študije so morala biti izpolnjena naslednja merila:

- empirična, kvantitativna študija, ki se osredotoča na zadovoljstvo z bivalnim okoljem, z bivališčem in/ali s sosesko (brez zadovoljstva s skupnostjo);
- poglavitna osredotočenost na vsaj eno od naslednjih ravni bivalnega okolja: bivalna enota, stavba oz. stanovanjski kompleks ali soseska (brez mest in širše regije);
- osredotočenost na stanovanjske stavbe na ravni bivališč in stavb (brez študij, ki so se izrecno osredotočale na enodružinske hiše, in študentskih domov, domov za starejše itd.);
- ocenjevanje na podlagi samoocenjevalnih vprašalnikov;
- ocenjevanje zadovoljstva z bivalnim okoljem na podlagi več vidikov bivalnega okolja (brez študij z le splošnimi vprašanji o zadovoljstvu z bivalnim okoljem);
- odrasla populacija, brez psihiatričnih pacientov in študentov.

Iskanje potencialnih študij za vključitev v pregled je potekalo v okviru Digitalne knjižnice Univerze v Ljubljani od 28. avgusta do 8. septembra 2017. Discipline, izbrane za iskanje, so bile arhitektura, psihologija in okoljske vede, kar je vodilo do iskanja v naslednjih podatkovnih zbirkah ali ponudnikih vsebin: PsychINFO, J-STAGE, Scopus, Complementary Index, Academic Search Complete, Science Citation Index, Social Sciences Citation Index, Supplemental Index, MEDLINE, GreenFILE, ScienceDirect, JSTOR Journals, ERIC in PsychARTICLES. Iskanje je bilo omejeno na naslednje tipe virov: akademske revije, disertacije/teze, konferenčna gradiva, e-knjige in pregledi, brez omejitve datuma objave. Iskalne ključne besede so vključevale zadovoljstvo z bivalnim okoljem (ang. *residential satisfaction*), zadovoljstvo s stanovanjsko situacijo (ang. *housing satisfaction*), zadovoljstvo z bivališčem (ang. *dwelling satisfaction*) in *zadovoljstvo s sosesko* (ang. *neighbourhood satisfaction*) ter so bile vključene samostojno in v kombinaciji z izrazi *lestvica* (ang. *scale*), *merjenje* (ang. *measurement*) in *vprašalnik* (ang. *questionnaire*), in to v Boolovem/Fraznem načinu iskanja. Dodatne študije so bile opredeljene na podlagi branja celotnih izbranih študij, kot je prikazano na diagramu poteka postopka izbire študij (slika 1).

V postopku izbiranja smo za vključitev v pregled izbrali 54 študij s 47 izvirnimi lestvicami zadovoljstva z bivalnim okoljem, ki so zadostile že predstavljenim merilom. Na podlagi kakovosti uporabljenega vprašalnika ali kakovosti študije nismo izključili nobene študije, saj je eden glavnih namenov tega pregleda predstaviti karseda celovit prikaz vprašalnikov, uporabljenih na izbranem področju raziskovanja.

Iz izbranih študij smo pridobili naslednje podatke:
- izvor uporabljenega vprašalnika (že obstoječi vprašalnik, vprašalnik, razvit za trenutno študijo, prilagojen na podlagi kakšnega drugega vprašalnika ali sistema, itd.);
- država, v kateri je bila študija izvedena;
- velikost vključenega vzorca udeležencev;
- število postavk ali vključenih vidikov;
- oblika postavk in tip lestvice;
- poročane psihometrične značilnosti vprašalnika in uporabljeni postopki (pregled notranje strukture vprašalnika, zanesljivost vprašalnika in njegovih podlestvic, postopki preverjanja veljavnosti).

3 Rezultati in razprava

V 54 študijah, vključenih v pregled (glej preglednico 1), je bilo uporabljenih 47 lestvic ali vprašalnikov zadovoljstva z bivalnim okoljem. Število pregledanih vprašalnikov ni enako kot število vključenih študij, saj je glavni namen tega pregleda oceniti vse razpoložljive študije in vključene vprašalnike, ki so zadostili izbranim merilom. To odločitev dodatno podpira dejstvo, da je proces preverjanja veljavnosti vprašalnika dolgotrajen (John in Soto, 2009) in se običajno o njem poroča v več kot eni študiji. Kot je navedeno v preglednici 1, kljub našim najboljšim prizadevanjem nekatere študije niso bile dostopne, zato seznam vključenih študij ni popoln, vendar sklepamo, da zadostuje za predstavitev splošnega stanja raziskovalne prakse na tem področju.

3.1 Vprašalniki v raziskovanju zadovoljstva z bivalnim okoljem

Na podlagi prvega raziskovalnega vprašanja smo pregledali, kateri vprašalniki so bili vključeni v izbrane študije. V večini študij (n = 19, glej preglednico 1) se ni poročalo o izvoru izbranega vprašalnika, kar pomeni, da ni bilo navedbe glede uporabljenega vprašalnika niti niso bile navedene informacije o razvoju vprašalnika. Druga največja kategorija študij (n = 18) je vsebovala vprašalnike, razvite posebej za pregledano študijo. V malo študijah so se uporabile že obstoječe lestvice (n = 8) ali so se prilagodile iz kakšne druge študije, vprašalnika ali sistema (n = 9). Večina vprašalnikov je bila uporabljenih v le eni od pregledanih študij, razen v naslednjih petih primerih: (1) lestvica habitabilnosti (ang. *Scale of habitability*) v študijah Phillipsa idr. (2005) in Fernández-Porterove idr. (2017), (2) vprašalnik v študijah Jansenove (2013, 2014), (3) vprašalnik v študijah Lesliejeve in Cerinove (2008) ter Leejeve idr. (2017), (4) vprašalnik v študijah Kellekcija in Berkozove (2006) ter Berkozove idr. (2009), pri čemer domnevamo, da je bil v obeh uporabljen isti vzorec podatkov, ter (5) vprašalnik v študijah Ibema in Aduwa (2013) ter Ibema in Amola (2013a, 2013b, 2014), pri čemer ni bilo navedbe glede uporabljenega vprašalnika v nobeni od študij, vendar glede na sporočene postavke vprašalnika in značilnosti vprašalnika domnevamo, da je bila v vseh štirih študijah uporabljena enaka lestvica ali njena nekoliko prirejena različica.

Prvo opažanje glede pregledanih študij se nanaša na pomanjkanje zadostnega poročanja o uporabljenih vprašalnikih. V 19 študijah ni bilo jasne informacije o izvoru vprašalnika, zato je bralcu teh študij na voljo zelo malo informacij o značilnostih vprašalnika in njegovega razvoja, ki so potrebne za informirane presoje o kakovosti uporabljenih vprašalnikov in metodologije študije ter splošne kakovosti sklepnih ugotovitev študije.

Naslednje zanimivo opažanje je, da so se v 18 od 54 študij avtorji odločiti razviti vprašalnik za zadevno študijo, z običajno zelo omejenim poročanjem o razlogih za takšno odločitev in o samem razvoju vprašalnika, kar podpira opažanje Adriaansejeve (2007), da raziskave zadovoljstva z bivalnim okoljem pogosto temeljijo na seznamih značilnosti bivalnega okolja, ki jih arbitrarno določi raziskovalec. Čeprav odločitev za razvoj novega vprašalnika za specifično študijo ni napačna, se pojavlja vprašanje o utemeljenosti takšne odločitve. Na splošno lahko razvoj psihometrično kakovostnega vprašalnika traja več let in zahteva veliko izvedenih študij, ki privedejo do vprašalnika znanih lastnosti, na podlagi katerega lahko med drugim presojamo kakovost študije. V zvezi z zadovoljstvom z bivalnim okoljem primanjkujejo psihometrično kakovostni vprašalniki, ob tem pa je verjetno, da če je *ad hoc* vprašalnik razvit za vsako študijo posebej, psihometrične značilnosti ne bodo dovolj temeljito preverjene, kar postavlja pod vprašaj sklepne ugotovitve tovrstnih študij.

V nadaljevanju smo pregledali vprašalnike glede na njihove osnovne značilnosti. Glede na vsebino postavk (ne na informacije, ki jih poročajo avtorji študij) je bila večina vprašalnikov osredotočenih na zadovoljstvo s sosesko n = 18), nekoliko manj pa na vse tri ravni bivalnega okolja, vključene v ta pregled (bivalna enota, stavba in soseska; n = 16). Le malo vprašalnikov je bilo osredotočenih na ravni bivališča in soseske (n = 8), na ravni stavbe in soseske (n = 3), na ravni bivališča in stavbe (n = 2) in na ravni bivališča (n = 1), kar je v nasprotju s prejšnjimi študijami, v katerih so ugotovili, da se večina raziskav osredotoča na le eno raven bivalnega okolja (npr. Buys

Preglednica 1: Lastnosti vprašalnikov, vključenih v pregled

Številka vprašalnika	Referenca študije	Ime vprašalnika	Izvor vprašalnika oz. lestvice	Država študije	(Skupni) N vzorca	Raven bivalnega okolja	Število postavk/vidikov[1]	Oblika postavk	Odgovorna lestvica
			1 – že obstoječa lestvica; 2 – razvit za zadevno študijo; 3 – prilagojen iz kakšne druge študije, vprašalnika ali sistema 4 – ne poročajo			1 – bivalna enota ali stanovanje 2 – stavba 3 – soseska		0 – ne poročajo 1 – seznam vidikov 2 – v obliki trditev	
1	Ukoha in Beamish, 1996		2	Nigerija	1.089	1, 2, 3	35	1	5-st. Likertova
2	Liu, 1999		2	Hongkong	212	1, 2, 3	30	1	5-st.
3	Phillips idr., 2005[2]	Lestvica habitabilnosti (ang. *Scale of habitability*)	2	Hongkong	518	1, 2, 3	18	1	5-st.
	Fernández-Portero idr., 2017[2]		1 (Phillips idr., 2005; Siu & Wong, 2001[0]; Loo, 2000[0])	Španija	316		20		5-st. Likertova
4	Potter in Cantarero, 2006		2	Nebraska, ZDA	100	1, 2, 3	15	2	5-st. Likertova
5	Mohit idr., 2010[3]		2	Malezija	102	1, 2, 3	45	1	5-st. Likertova
6	Mohit in Nazyddah, 2011[3]		2	Malezija	250	1, 2, 3	45	1	5-st. Likertova
7	Mohit in Azim, 2012		4	Maldivi	100	1, 2, 3	46	1	5-st. Likertova
8	Jansen, 2013[4]		1 (Profil kupcev bivališč, Boumeester idr., 2008[0])	Nizozemska	1.032	1, 2, 3	8	1	1–100
	Jansen, 2014[4]		1 (Profil kupcev bivališč, Boumeester idr., 2008[0])		1.047				
9	Ibem in Aduwo, 2013[5]		4	Nigerija	452	1, 2, 3	27	1	5-st. Likertova
	Ibem in Amole, 2013a[5]		2		156				
	Ibem in Amole, 2014[5]		4		452				
	Ibem in Amole, 2013b5		4		452		31		
10	Dinç idr., 2014		2	Turčija	80	1, 2, 3	45	1	5-st. Likertova
11	McGirr idr., 2015		4	Kanada	292	1, 2, 3	16	1	5-st. Likertova
12	Mohit in Adel Mahfoud, 2015		2	Malezija	216	1, 2, 3	54	1	5-st. Likertova
13	Mridha, 2015		2	Bangladeš	204	1, 2, 3	65	1	Likertova
14	Pekkonen in Haverinen-Shaughnessy, 2015		2	Finska	1.308	1, 2, 3	7	0	[–]
15	Zhang in Lu, 2016		4	Kitajska	184	1, 2, 3	20	1	5-st.
16	Schwirian in Schwirian, 1993		3 (Ahlbrandt, 1984[0]; Bohland in Herbert, 1983[0])	Ohio, ZDA	254	1, 3	16	2	[–]
17	Adriaanse, 2007[6]	Lestvica zadovoljstva z bivalnim okoljem	3 (Raziskava potreb po bivališčih; brez reference)	Nizozemska	75.034	1, 3	16	2	5-st. Likertova
18	Adriaanse, 2007[6]	Lestvica zadovoljstva z bivalnim okoljem – okrajšana različica	3 (Raziskava potreb po bivališčih; brez reference)	Nizozemska	75.034	1, 3	8	2	5-st. Likertova
19	Li in Song, 2009		4	Kitajska	1.200	1, 3	21	1	5-st.
20	Rioux in Werner, 2011		2	Francija	103	1, 3	18	2	5-st.
21	Buys in Miller, 2012		4	Avstralija	636	1, 3	107	1	5-st. Likertova
22	Huang in Du, 2015		4	Kitajska	476	1, 3	12	1	5-st. + kategorični odgovori
23	Makinde, 2015		3 (Elementi ocenjevanja nizkocenovnih stanovanjskih nepremičnin v Ikorodu; brez reference)	Nigerija	122	1, 3	38	1	5-st. Likertova

Številka vprašalnika	Referenca študije	Ime vprašalnika	Izvor vprašalnika oz. lestvice	Država študije	(Skupni) N vzorca	Raven bivalnega okolja	Število postavk/vidikov[1]	Oblika postavk	Odgovorna lestvica
			1 – že obstoječa lestvica; 2 – razvit za zadevno študijo; 3 – prilagojen iz kakšne druge študije, vprašalnika ali sistema 4 – ne poročajo			1 – bivalna enota ali stanovanje 2 – stavba 3 – soseska		0 – ne poročajo 1 – seznam vidikov 2 – v obliki trditev	
24	Afacan in Demirkan, 2016		2	Turčija	240	1, 2	23	1	7-st. Likertova
25	Xue, Mak, in Ai, 2016		2	Hongkong	482	1, 2	15 (+ 3 na višji ravni)	1	5-st.
26	Fleury-Bahi idr., 2008		4	Francija	257	2, 3	18	1	4-st.
27	Muhammad idr., 2010		2	Malezija	638	2, 3	37	1	5-st. Likertova
28	Erdogan idr., 2007		3 (Bardo in Dokmeci, 1992[0])	Turčija	264	2, 3	35	2	5-st.
29	Barmark, 2015		2	Švedska	1.131	1	5	2	5-st.
30	Bonaiuto idr., 1999	Zaznana kakovost bivalnega okolja (ang. *Perceived residential environmental quality – PREQ*)	1 (Bonnes idr., 1997[0])	Italija	497	3	101	2	4-st.
31	Sirgy in Cornwell, 2002		4	Zahodna Virginia, ZDA	380	3	[ni navedeno]	0	7-st.
32	Bonaiuto idr., 2004	Lestvica zadovoljstva z bivalnim okoljem (ang. *Residential satisfaction scale*)	1 (Bonnes idr., 1991[0]; Bonnes idr., 1990[0])	Italija	152	3	38	2	4-st.
33	Ge in Hokao, 2004[7]		4 (Hierarhični več-vidikovni indeksni sistem za zadovoljstvo z bivalnim okoljem; brez reference)	Japonska	1.882	3	44	1	5-st.
34	Ge in Hokao, 2006[7]		3 (Ge in Hokao, 2004)	Japonska	1.503	3	36 / 30[8]	0	5-st.
35	Xiaoyu idr., 2007[7]		3 (Ge in Hokao, 2004)	Kitajska	818	3	49	0	5-st.
36	Kearney, 2006		3 (rezultati intervjujev iz Kearney in Kaplan, 1997[0])	Washington, ZDA	216	3	26	2	5-st. Likertova
37	Kellekci in Berkoz, 2006[9,10]		2	Turčija	401	3	18	2	[–]
	Berkoz idr., 2009[9,10]		1 (Kellekci in Berkoz, 2006)		401				
38	Hur in Morrow-Jones, 2008		4	Ohio, ZDA	2.060	3	15	2	7-st. Likertova
39	Leslie in Cerin, 2008[11]		1 (brez reference)	Avstralija	2.194	3	17	1	5-st.
	Lee idr., 2017[11]		3 (Leslie in Cerin, 2008)	ZDA	1.726				
40	Oshio in Urakawa, 2012		4	Japonska	8.139	3	3	2	5-st.
41	Salleh in Badarulzaman, 2012		4	Malezija	100	3	19	1	5-st. Likertova
42	Van Herzene in De Vries, 2012		4	Belgiija	190	3	8	2	5-st.
43	McCrea idr., 2014		4	Avstralija	675	3	20	1	5-st. Likertova
44	Afacan, 2015		2	Turčija	200	3	28	1	5-st.
45	Hadavi in Kaplan, 2016		1 (Hadavi, 2015[0])	Philadelphia, ZDA	434	3	17	1	5-st.
46	Yamada idr., 2016		4	Japonska	327	3	9	1	5-st.
47	Ibem idr., 2017		4	Nigerija	517	3	24	1	5-st. Likertova

Opombe. [0] Celotni članki avtorjem tega pregleda niso bili dostopni. [1] Če je bil začetni izbor postavk zmanjšan za končno obliko vprašalnika in/ali za končno analizo, je navedeno število končnega izbora. [2] Poročajo o istem vprašalniku, vendar se lastnosti vprašalnika razlikujejo. [3, 5] Uporabljen vprašalnik je glede na poročane lastnosti najverjetneje enak, vendar ni navedena neposredna referenca. [4, 9] Uporabljen je enak vprašalnik. [6] Tako lestvica kot njena okrajšana različica sta poročani v okviru iste študije. [7] Uporabljena je ista osnova vprašalnika, vendar se poročane lastnosti vprašalnikov razlikujejo. [8] 36 vidikov, vključenih v študiji v mestu Saga, in 30 v študiji v mestu Kitakyushu. [10] Glede na rezultate, poročane v članku, predpostavljamo, da je bil isti nabor podatkov uporabljen v obeh študijah. [11] Uporabljen je enak vprašalnik, psihometrične analize pa se razlikujejo.

Preglednica 2: Postopki preverjanja notranje strukture, zanesljivosti in veljavnosti za pregledane vprašalnike

Številka vprašalnika	Referenca študije	Ime vprašalnika	Ocenjevanje notranje strukture	Dimenzije vprašalnika glede na analizo notranje strukture	Koeficient (-i) zanesljivosti			Postopki zunanje veljavnosti
			0 – ne/ni poročano; 1 – da (tip uporabljene analize)	0 – ne/ni poročano	Za vključene dimenzije	Koeficient	Za celotno lestvico	0 – ne/ni poročano; 1 – da
1	Ukoha in Beamish, 1996		0	0	0	0	0	1
2	Liu, 1999		1 (AGK)	1. upravljanje in vzdrževanje stanovanjskega naselja, 2. osvetljenost in zračnost, 3. priročnost lokacije, 4. videz stavbe, 5. okolica, 6. gibanje v prostoru, 7. inštalacije požarne varnosti, 8. primernost lokacije, vključno z zasebnostjo, 9. uporabljeni gradbeni materiali	0	0	0	0
3	Phillips idr., 2005	Lestvica habitabilnosti	1 (AGK)	1. notranje okolje, 2. zunanje okolje, 3. vprašanja varnosti	1. α = 0,78 2. α = 0,76 3. α = 0,72	Cronbachov koeficient α	0	1
	Fernández-Portero idr., 2017		1 (EFA)	1. notranja habitabilnost, 2. zunanja habitabilnost	0		α = 0,87	
4	Potter in Cantarero, 2006		0	0	0	Cronbachov koeficient α	α = 0,89	0
7	Mohit in Azim, 2012		0	0	0	0	0	1
9	Ibem in Aduwo, 2013		1 (AGK)	1. opremljenost soseske, 2. upravljanje stanovanjskega naselja, 3. velikost bivalnih enot, 4. tip in lokacija stanovanjske zgradbe v naselju, 5. stanovanjske storitve, 6. značilnosti stanovanjske enote, 7. socialno okolje	0	Cronbachov koeficient α	α = 0,89	0
	Ibem in Amole, 2013a			1. lokacija stanovanjskega naselja, 2. upravljanje stanovanjskega naselja, 3. velikost stanovanjske zgradbe, 4. tip in lokacija stanovanjske zgradbe v naselju, 5. stanovanjske storitve, 6. značilnosti stanovanjske enote, 7. socialno okolje	1. α = 0,85 2. α = 0,80 3. α = 0,80 4. α = 0,71 5. α = 0,74 6. α = 0,71 7. α = 0,72		0	1
	Ibem in Amole, 2013b			1. osvetljenost, zračnost in velikost bivalnih enot, 2. opremljenost soseske, 3. upravljanje stanovanjskega naselja, 4. varnost stanovanjske zgradbe, 5. stanovanjske storitve, 6. zasebnost in toplotno udobje	0	0	0	1
	Ibem in Amole, 2014		1 (EFA)	1. lokacija stanovanjskega naselja, 2. upravljanje stanovanjskega naselja, 3. velikost stanovanjske zgradbe, 4. tip in lokacija stanovanjske zgradbe v naselju, 5. stanovanjske storitve, 6. značilnosti bivalne enote, 7. socialno okolje	(za posamezne postavke, ne lestvice glede na EFA)	Cronbachov koeficient α	0	0
10	Dinç idr., 2014		1 (korelacije med podlestvicami)	1. razdalje, 2. značilnosti stanovanjskega kompleksa, 3. upravljanje, 4. funkcionalni vidiki stanovanja, 5. konstrukcijski vidiki stanovanja	1. α = 0,74 2. α = 0,85 3. α = 0,83 4. α = 0,88 5. α = 0,86	Cronbachov koeficient α	0	1
12	Mohit in Adel Mahfoud, 2015		0	0	0	0	0	1
13	Mridha, 2015		1 (AGK)	1. upravljanje in vzdrževanje, 2. arhitekturne značilnosti, 3. soseska, 4. sosedi, 5. rekreacijski objekti, 6. značilnosti zunanjih površin	0	0	0	1
16	Schwirian in Schwirian, 1993		0	0	0	Cronbachov koeficient α	α = 0,77	0
17	Adriaanse, 2007	Lestvica zadovoljstva z bivalnim okoljem	1 (AGK)	1. ugled soseske, 2. družbena klima, 3. zadovoljstvo z bivališčem	1. α = 0,82 2. α = 0,75 3. α = 0,68	Cronbachov koeficient α	α = 0,86	1

Številka vprašalnika	Referenca študije	Ime vprašalnika	Ocenjevanje notranje strukture	Dimenzije vprašalnika glede na analizo notranje strukture	Koeficient (-i) zanesljivosti			Postopki zunanje veljavnosti
			0 – ne/ni poročano; 1 – da (tip uporabljene analize)	0 – ne/ni poročano	Za vključene dimenzije	Koeficient	Za celotno lestvico	0 – ne/ni poročano; 1 – da
188	Adriaanse, 2007	Lestvica zadovoljstva z bivalnim okoljem – okrajšana različica	1 (AGK)	(1 neimenovan faktor)	0	0	0	1
20	Rioux in Werner, 2011		1 (AGK)	1. splošno zadovoljstvo s sosesko, 2. zadovoljstvo z dostopom do storitev v soseski, 3. zadovoljstvo z odnosi s sosedi, 4. zadovoljstvo z domom	1. α = 0,81 2. α = 0,79 3. α = 0,85 4. α = 0,86	Cronbachov koeficient α	0	0
21	Buys in Miller, 2012		0	0	0	0	0	1
22	Huang in Du, 2015		1 (AGK)	1. lastnosti soseske, 2. javni objekti, 3. značilnosti bivališča	0	0	0	1
25	Xue idr., 2016		0	1. kakovost zraka in toplotno udobje, 2. udobje glede svetlobe, 3. akustično udobje	1. α = 0,77 2. α = 0,86 3. α = 0,71	Cronbachov koeficient α	0	1
26	Fleury-Bahi idr., 2008		1 (AGK)	1. socialna podoba soseske, 2. storitve, 3. zelene površine, 4. socialni odnosi	1. α = 0,83 2. α = 0,65 3. α = 0,61 4. α = 0,60	Cronbachov koeficient α	α = 0,79	0
27	Muhammad idr., 2010		1 (AGK)	1. značilnosti bivališča, 2. javna infrastruktura, 3. značilnosti soseske, 4. storitve transporta in komunikacije, 5. storitve odstranjevanja trdnih odpadkov, 6. zaščita okolja, 7. javnozdravstvene storitve, 8. varnost	1. α = 0,92 2. α = 0,95 3. α = 0,94 4. α = 0,83 5. α = 0,84 6. α = 0,85 7. α = 0,85 8. α = 0,96	(ime koeficienta ni poročano)	0	0
29	Barmark, 2015		1 (AGK)	1. zadovoljstvo s stanovanjskimi razmerami	1. α = 0,83	Cronbachov koeficient α	0	0
30	Bonaiuto idr., 1999	Zaznana kakovost bivalnega okolja	1 (AGK)	1. arhitektonski in urbanistični prostor, 2. značilnosti družbenih odnosov, 3. natančnost in nenatančnost (glede storitev znotraj omrežja), 4. kontekstualne značilnosti	(Za dejavnike v sklopu nižje ravni, kot je prikazano v tabeli.)	Cronbachov koeficient α	0	0
31	Sirgy in Cornwell, 2002		0	0	0	0	0	1
32	Bonaiuto idr., 2004	Lestvica zadovoljstva z bivalnim okoljem	1 (AGK)	1. gostota gradnje/populacije in nehabitabilnosti, 2. socioprostorska negotovost, 3. funkcionalna nezadostnost/nerazpoložljivost	0	0	0	0
33	Ge in Hokao, 2004		1 (AGK)	1. priročnost (1.1 priročnost bivalnih objektov, 1.2 priročnost dostopa do dela in študija, 1.3 priročnost dostopa do bližnjih mest), 2. udobje (2.1 udobje glede naravnega bivanja, 2.2 okolje, 2.3 udobje krajine), 3. zdravje (3.1 zdravje – higieničnost, 3.2 zdravje – neonesnaženost), 4. varnost (4.1 stanovanjska varnost), 5. skupnost (5.1 stanovanjska skupnost)	0	0	0	1
34	Ge in Hokao, 2006		1 (AGK)	1. varnost, 2. zdravje, 3. udobje, 4. priročnost, 5. skupnost	0	0	0	0
36	Kearney, 2006		1 (AGK)	1. občutek skupnosti, 2. zadovoljstvo z deljenim zunanjim prostorom, 3. zadovoljstvo z bližnjo naravo, 4. pomisleki glede lokalne gostote (poselitve), 5. pomisleki glede regionalne gostote (poselitve)	1. α = 0,87 2. α = 0,76 3. α = 0,79 4. α = 0,93 5. α = 0,80	Cronbachov koeficient α	0	0

Številka vprašalnika	Referenca študije	Ime vprašalnika	Ocenjevanje notranje strukture	Dimenzije vprašalnika glede na analizo notranje strukture	Koeficient (-i) zanesljivosti			Postopki zunanje veljavnosti
			0 – ne/ni poročano; 1 – da (tip uporabljene analize)	0 – ne/ni poročano	Za vključene dimenzije	Koeficient	Za celotno lestvico	0 – ne/ni poročano; 1 – da
37	Berkoz idr., 2009 Kellekci in Berkoz, 2006		1 (AGK) 1 (AGK)	1. zadovoljstvo z rekreacijskimi območji, 2. osrednje zadovoljstvo, 3. zadovoljstvo glede socialne in fizične strukture, 4. značilnosti namestitve, 5. zadovoljstvo s transportom in dostopnostjo, 6. zadovoljstvo z družbenimi objekti	0	0	0	0
38	Hur in Morrow-Jones, 2008		0	0	0	0	0	1
39	Lee idr., 2017		0	0	test-retest ICC za posamezne postavke na ločenem vzorcu (ICC > 0,70 za 16 od 17 postavk)	Cronbachov koeficient α	α = 0,86	0
	Leslie in Cerin, 2008		1 (AGK)	1. varnost in pohodnost, 2. dostop do destinacij, 3. družbeno omrežje, 4. potovalno omrežje, 5. promet in hrup	0	0	0	0
40	Oshio in Urakawa, 2012		0	0	0	0	0	1
42	Van Herzene in De Vries, 2012		1 (AGK)	1. lastnosti soseske, 2. socialna kohezija	0	0	0	0
43	McCrea idr., 2014		0	0	0	0	0	1
44	Afacan, 2015		1 (FA)	1. fizični vidiki soseske, 2. interakcija z drugimi stanovalci soseske, 3. občutek pripadnosti in udobja glede soseske, 4. dimenzija vzdrževanja	0	Cronbachov koeficient α	α = 0,87	0
45	Hadavi in Kaplan, 2016		1 (AGK)	1. količina storitvene ponudbe, 2. količina zelenih površin, 3. število javnih prostorov, 4. udobje soseske	1. α = 0,84 2. α = 0,77 3. α = 0,88 4. α = 0,76	Cronbachov koeficient α	0	0
47	Ibem idr., 2017		1 (EFA)	1. storitve in infrastruktura, 2. socioekonomsko okolje, 3. varnost, 4. hrup in zasebnost	1. α = 0,90 2. α = 0,71 3. α = 0,71 4. α = 0,71	Cronbachov koeficient α	0	0

Opombe. V tej tabeli so navedene informacije o notranji strukturi vprašalnikov, zanesljivosti in veljavnosti, poročanih v okviru pregledanih študij. Zato so študije, v okviru katerih niso poročali o nobenih od teh informacij, izključene iz tabele. [1] Analiza notranje strukture vprašalnika: EFA = eksploratorna faktorska analiza, FA = faktorska analiza (pri čemer ni bilo poročano, ali je bila uporabljena EFA ali konfirmatorna faktorska analiza), AGK = analiza glavnih komponent.

in Miller, 2012), vendar skladno z opažanjem Aigbavboa in Thwale (2016), da je raven soseske najpogosteje raziskovana raven na področju zadovoljstva z bivalnim okoljem.

Pregledani vprašalniki so vključevali od 3 do 107 vidikov bivalnega okolja, s povprečjem 28,6 vidika. Ti vidiki so bili v dveh oblikah postavk, in sicer v obliki seznamov vidikov (n = 29) in v obliki trditev (n = 14), za štiri vprašalnike pa niso poročali o obliki postavk (postavk tudi niso navedli). Pri večini vprašalnikov so respondenti svoje mnenje podajali na petstopenjski lestvici Likertovega tipa (n = 21).

3.2 Uporabljeni postopki za ocenjevanje psihometričnih značilnosti vprašalnikov

V teoretičnem modelu razvoja lestvic, ki ga je predlagala Loevingerjeva (1957) in sta ga izpopolnila Clarkova in Watson (1995), so pomembni trije vidiki konstruktne veljavnosti: vsebinska in strukturna veljavnost, ki se skupaj nanašata na notranjo in zunanjo veljavnost lestvice, in zunanja veljavnost lestvice. Vsebinska veljavnost se osredotoča na kritično točko v razvoju katere koli lestvice, saj se nanaša na teoretično konceptualizacijo tega, kar želimo meriti, in na razvoj postavk, ki

bodo potencialno vključene v lestvico, vendar ta ni primarni cilj tega pregleda. Ker obstaja več konceptualizacij zadovoljstva z bivalnim okoljem z različnimi implikacijami za merjenje, v pregledanih študijah pa predstavljajo različne načine in ravni podrobnosti, ki jih vključujejo pri poročanju o razvoju postavk vprašalnika iz njihovih konceptualizacij, bi bil potreben obsežen, ločen pregled (ali več njih), da bi lahko v celoti ovrednotili ta proces. Zato smo se v drugem delu procesa pregledovanja osredotočili na strukturno veljavnost z zanesljivostjo in postopke, uporabljene za razumevanje strukture vprašalnikov, ter na izvedene postopke preverjanja zunanje veljavnosti (glej preglednico 2), saj so to temeljni koncepti, ki pomagajo oceniti kakovost mer (John in Soto, 2009).

3.2.1 Posplošljivost

Posplošljivost se nanaša na stopnjo, do katere lahko iz opazovanj sklepamo na druge postavke, vzorce, mere itd., kar je eno izmed temeljnih vprašanj empirične znanosti. Ocenjevanje posplošljivosti je potrebno za preverjanje veljavnosti vprašalnika, saj so mere, za katere lahko ponudimo dokaze o posplošljivosti, veliko bolj uporabne v primerjavi s tistimi, na podlagi katerih ne moremo posploševati (John in Soto, 2009). V tem pregledu večina vprašalnikov (n = 30) spada v zadnjo kategorijo, saj v nobeni od pregledanih študij zanje ni bilo poročano o postopkih za ocenjevanje zanesljivosti.

Pojem posplošljivosti vključuje tradicionalno proučevane koncepte tako zanesljivosti kot kriterijske veljavnosti, o katerih razpravljamo v nadaljevanju tega pregleda. Ocenjevanje zanesljivosti ima v psihometrični evalvaciji vprašalnika pomembno vlogo, saj se nanaša na skladnost merskega postopka, njeni indici pa kažejo na obseg, do katerega so rezultati, pridobljeni z merjenjem, ponovljivi. Značilnosti udeleženca, testna situacija, vprašalnik in eksperimentator lahko prispevajo k merskim napakam, analiza zanesljivosti vprašalnika pa lahko omogoči vpogled v količino te napake in ponudi namige za odločitve o tem, ali lahko to količino napake toleriramo glede na cilje raziskave. Glede na teorijo posplošljivosti (John in Soto, 2009) nas zanesljivost zanima zaradi želje, da bi posploševali z enega opazovanja na neko drugo kategorijo opazovanj ali na druge postavke (v sklopu vprašalnika), testne situacije (npr. zadovoljstvo s sosesko v dveh časovnih točkah) ali ocenjevalce (npr. pri ocenjevanju podobnosti ocen pomembnosti različnih vidikov okolja preko stanovalcev). Trdimo lahko, da bi bil vsaj eden od teh vidikov v interesu raziskovalcev in bralcev za vsak vprašalnik, vključen v ta pregled.

Glede na vrsto opazovanj, ki jih želimo posplošiti, so tipični trije tipi postopkov in raziskovalnih načrtov študij, in sicer postopki notranje skladnosti (postavke), retestni oziroma načrti s ponovljenimi meritvami (testne situacije) in načrti strinjanja med ocenjevalci (ocenjevalci; John in Soto, 2009). Med vprašalniki, za katere so bili uporabljeni postopki ocenjevanja zanesljivosti (17 vprašalnikov v 20 študijah), je bil najpogosteje poročan (le) Cronbachov koeficient alfa (n = 78), v okviru ene študije se je poročalo tudi o retestni zanesljivosti skupaj z vrednostjo Cronbachovega koeficienta alfa, v okviru druge študije pa se je sporočala le vrednost, ne pa tudi vrsta uporabljenega koeficienta. V splošnem so se raziskovalci ukvarjali s posplošljivostjo preko postavk, saj je Cronbachov koeficient alfa najbolj uporabljen koeficient notranje skladnosti (John in Soto, 2009; Bonnet in Wright, 2015; Cho in Kim, 2015). Za le en vprašalnik (Lee idr., 2017) so raziskovalci dodatno poročali o korelacijah med dosežki udeležencev v dveh časovnih točkah in s tem razširili obseg ocenjevanja zanesljivosti na testne situacije, kar lahko potencialno ponudi več dokazov o posplošljivosti sklepnih ugotovitev, oblikovanih na podlagi zadevne mere.

Ker je bil v pregledanih študijah Cronbachov koeficient alfa najpogosteje uporabljen postopek, je pomembno opozoriti, da ta ne bi smel biti samodejna izbira. Je namreč natančna mera zanesljivosti, ko so postavke testa približno esencialno tau-enakovredne, kar kaže med drugim na to, da merijo eno samo lastnost, in ko so napake merjenja/ocenjevanja postavk nekorelirane. Ker je predvsem esencialna tau-ekvivalentnost v praksi redka, je priporočljivo to predpostavko predhodno preveriti (Cortina, 1993; Cho in Kim, 2015), kar v pregledanih študijah ni bilo (dovolj) jasno. Na podlagi splošne prakse se je v okviru študij poročalo le o vzorčni vrednosti Cronbachovega koeficienta alfa, ki je bil v splošnem pri študijah, z nekaj izjemami, na sprejemljivi ravni, in sicer okoli 0,80 ali 0,90 (Nunnally in Bernstein, 1994; glej preglednico 2). Vendar to ni, kot predlagata Bonnet in Wright (2015), popolnoma ustrezen pristop, še posebej za majhne vzorce (npr. kot v Potter in Cantarero, 2006; Rioux in Werner, 2011; Dinç idr., 2014; Ibem in Amole, 2013a), saj »vzorčna vrednost Cronbachovega koeficienta alfa vsebuje napake vzorčenja neznanih smeri in neznane velikosti« (Bonnet in Wright, 2015: 4). Predlagajo poročanje tudi o intervalih zaupanja za populacijske vrednosti Cronbachovega koeficienta alfa, česar pa v pregledanih študijah ni.

3.2.2 Strukturna veljavnost

Glede pregledanih študij je zanimivo omeniti, da so nekateri avtorji (Schwirian in Schwirian, 1993; Potter in Cantarero, 2006; Xue idr., 2016; Lee idr., 2017) poročali o koeficientih notranje skladnosti, pri čemer niso poročali o poskusih ocenjevanja dimenzionalnosti vprašalnika. Ti so pomembni, saj Cronbachov koeficient alfa ne omogoča zaključkov o dimenzionalnosti vprašalnika (John in Soto, 2009), čeprav se

morda zdi, da je to mogoče. Če test kaže sprejemljivo raven Cronbachovega koeficienta alfa, potem je napaka, povezana z uporabo različnih postavk, relativno majhna. Vendar je vse, kar lahko sklepamo iz te informacije, to, da test nekaj meri skladno, vendar še vedno ni znano, kaj natančno meri, zato je za oblikovanje pomena vprašalnika nujna nekakšna oblika preverjanja konstruktne veljavnosti (Cortina, 1993), ki vključuje tudi preverjanje notranje strukture testa (Furr in Bacharach, 2013).

Notranja struktura testa je primer strukturne veljavnosti, ki zahteva dokaze o skladnosti strukture postavk s predpostavljeno notranjo strukturo (John in Soto, 2009). Nanaša se na dimenzionalnost vprašalnika, tj. ali je vprašalnik namenjen merjenju enega ali več fizičnih ali psiholoških lastnosti predmeta oziroma osebe (Furr in Bacharach, 2013). Razumevanje tipa vprašalnika, ki je v razvoju ali v uporabi, glede na njegovo dimenzionalnost, je izjemno pomembno, saj imajo različni tipi testov različne značilnosti, ki imajo pomembne implikacije za točkovanje, ocenjevanje in uporabo glede na zaključke, ki jih ponujajo. Za ocenjevanje notranje strukture vprašalnika so na voljo številni statistični postopki (npr. faktorska analiza, klastrska analiza, večrazsežnostno lestvičenje; prav tam). Izmed pregledanih vprašalnikov (glej preglednico 2) je bil le za manj kot polovico teh (n = 23 poročano v okviru 25 študij) poročan nekakšen postopek za ocenjevanje notranje strukture v vsaj eni od študij. Za večino vprašalnikov (n = 20) je bila izvedena analiza glavnih komponent, druge metode pa so bile manj pogoste (eksploratorna faktorska analiza (n = 3) in nespecificirana faktorska analiza (n = 1)). Ugotovitve postopkov, uporabljenih za ocenjevanje notranje strukture pregledanih vprašalnikov, so zunaj obsega tega pregleda, vendar je treba pozornost nameniti dejstvu, da se za 24 pregledanih vprašalnikov o postopkih ocenjevanja notranje strukture ni poročalo v okviru nobene od pregledanih študij (n = 25). Čeprav je mogoče, da je bil cilj vsaj nekaterih od teh študij proučiti zadovoljstvo s specifičnimi, izbranimi vidiki bivalnega okolja, pri čemer ne bi oblikovali skupnih dosežkov, ki bi ponazarjali zadovoljstvo z bivalnim okoljem, niti ne bi izvedli kompleksnejših analiz za poglobitev razumevanja danih podatkov, za mnoge od njih to ne velja.

Pri analizi notranje strukture vprašalnika je treba obravnavati nekaj vprašanj, npr. koliko dimenzij izražajo testne postavke? Če več kot eno, ali so te med seboj korelirane in katere natančno so te dimenzije ali, natančneje, katerim psihološkim, fizičnim ali drugim vrstam vidikov ustrezajo? To je pomembno, saj če gre za več kot eno dimenzijo, je lahko vsaka dimenzija ločeno ocenjevana na podlagi ločene podlestvice, ki zahteva ločeno psihometrično analizo, povezave med njimi pa imajo zaključke za pomen skupnega dosežka, če se izračunava, in, končno, za interpretacijo je treba razumeti pomen dosežka (Furr in Bacharach, 2013). Ker so bili v mnogih študijah oblikovani aditivni indeksi, namenjeni prikazu zadovoljstva z bivalnim okoljem na izbrani(-h) ravni(-eh), bi bilo morda smiselno raziskati dimenzionalnost, kar bi lahko ponudilo nadaljnje usmeritve glede sprejemanja bolj informiranih odločitev o sklepnih ugotovitvah, oblikovanih na podlagi analiz, in bi na splošno pripomoglo k zmanjšanju stanja arbitrarnosti, iz katerega so te seštevalne mere prepogosto konstruirane, kot sta že opazila Lu (1999) in Adriaansejeva (2007).

3.2.3 Zunanja veljavnost

Zunanja veljavnost mere se nanaša na proces, ki se običajno razume kot osrednji pomen veljavnosti: nanaša se na dokaze iz procesa preverjanja veljavnosti, da se mera povezuje z drugimi merami in netestnimi merili na načine, ki bi jih teoretično pričakovali. Nekateri od najobičajnejših načinov ocenjevanja zunanje veljavnosti potekajo na podlagi korelacije z merilom, pri čemer se postavlja vprašanje, ali merski dosežki korelirajo z izbranim merilom (John in Soto, 2009). Ta metoda je bila izbrana za 19 študij (za 17 vprašalnikov), v okviru katerih se je poročalo o informacijah o izpeljanih postopkih preverjanja veljavnosti. Najpogostejši način poročanih postopkov preverjanja veljavnosti je bil napovedovanje ali koreliranje splošnega zadovoljstva z izbrano ravnjo bivalnega okolja z dosežki na posameznih dimenzijah ali vidikih, vključenih v vprašalnik. Najpogosteje uporabljena tehnika je bila linearna regresija (Ukoha in Beamish, 1996; Sirgy in Cornwell, 2002; Ge in Hokao, 2004; Phillips idr., 2005; Hur in Morrow-Jones, 2008; Mohit in Azim, 2012; Ibem in Amole, 2013a, 2013b; Dinç idr., 2014; Huang in Du, 2015; Mohit in Adel Mahfoud, 2015; Mridha, 2015; Xue idr., 2016), sledila pa sta ji pregledovanje korelacijskih koeficientov (Buys in Miller, 2012; Oshio in Urakawa, 2012; McCrea idr., 2013) in strukturno modeliranje (Fernández-Portero idr., 2017). O zanimivem postopku je poročala Adriaansejeva (2007) pri preverjanju veljavnosti lestvice RESS in njene krajše različice, pri katerem je avtorica ocenjevala, ali je bil dosežek na lestvici zadovoljstva z bivalnim okoljem v predvidenem odnosu s sosesko, v kateri je udeleženec prebival.

Strukturna in zunanja veljavnost katerega koli merskega postopka sta le dve smeri, ki ju je treba proučiti pri preverjanju veljavnosti. Odločitev, da se v tem pregledu omejimo na omenjeni dve smeri veljavnosti, smo sprejeli po pregledu študij in njihovega poročanja o vloženih prizadevanjih glede preverjanja veljavnosti vprašalnikov. Klasična opredelitev veljavnosti se nanaša na stopnjo, do katere test meri, kar naj bi meril, ter vključuje konstruktno, kriterijsko in vsebinsko veljavnost, sodobnejši pogleda pa posega izven tega in trdi, da mora biti tudi interpretacija testnih dosežkov podprta s teorijo in empiričnimi dokazi (Furr in Bacharach, 2013). Da bi dokazali, da je merski postopek veljaven, ni enotne statistike, o kateri bi lahko v ta namen poročali. Validacija katerega koli merjenja je dolgotrajen proces (John in Soto, 2009), ki lahko z vsakim na-

daljnjim korakom zagotovi več informacij in dokazov o zadevnem vprašalniku in o tem, da so izhajajoče interpretacije vredne zaupanja v specifičnih situacijah in v zvezi z načini uporabe.

4 Sklep

Po pregledu študij zadovoljstva z bivalnim okoljem in vprašalnikov iz pristopa merjenja odzivov na več postavk o zadovoljstvu z različnimi vidiki okolja lahko sklenemo, da je zadovoljstvo z bivalnim okoljem razmeroma pogosto proučevano s tem pristopom, pri čemer pa je večina raziskovalcev premalo premislila in vložila premalo truda v razvoj vprašalnikov in preverjanje veljavnosti uporabljenih vprašalnikov, vsaj kolikor je razvidno iz informacij, poročanih v pregledanih študijah. Vprašalniki ali lestvice se opirajo na merske modele, ki so, kot večina modelov, poenostavitve koncepta in situacije, ki jo želimo proučevati. »Čeprav bi morali prikazati najboljši možni približek izbranega pojava, moramo pričakovati, da se bodo vsi delovni modeli sčasoma izkazali za napačne in bodo nadomeščeni z boljšimi modeli. Zato morajo biti merski modeli eksplicitno specificirani, da jih lahko ocenimo, ovržemo in izboljšamo« (John in Soto, 2009: 462). Vendar, kot ugotavljata Clark in Watson (1995), raziskovalci kompleksnosti teh konceptov še vedno ne razumejo v celoti, kar drži tudi na področju zadovoljstva z bivalnim okoljem. Pomanjkanje uporabe in poročanja o postopkih preverjanja veljavnosti močno otežuje ocenjevanje kakovosti študij, v katerih se ti vprašalniki uporabljajo. Pomanjkanje ustrezno razvitih in psihometrično preizkušenih vprašalnikov bi lahko bilo razlog, zakaj se raziskovalci tako pogosto odločijo za oblikovanje lastnih mer, saj je na voljo le malo vprašalnikov za uporabo v takšnem raziskovanju, s čimer se stanje nezadostnosti na področju zadovoljstva z bivalnim okoljem nadaljuje.

Na podlagi tega pregleda lahko oblikujemo nekaj predlogov za izboljšanje kakovosti raziskovanja na področju zadovoljstva z bivalnim okoljem. Najprej bi morali raziskovalci (in recenzenti) zagotoviti, da so informacije o uporabljenih vprašalnikih navedene v vseh objavah iz omenjene teme. Te informacije bi morale vključevati izvor vprašalnika in njegove osnovne značilnosti (tip vprašalnika, odgovorno lestvico, primer postavke vprašalnika, koeficiente notranje skladnosti itd.). Čeprav na tem področju ni na voljo veliko vprašalnikov s preverjeno veljavnostjo, bi se morali raziskovalci bolj nagibati k uporabi že razvitih vprašalnikov. Kadar to ni mogoče in je še vedno treba pripraviti povsem nov vprašalnik, bi morali razvoj takega novega vprašalnika pazljivo načrtovati. Izhajati bi moral iz temeljitega pregleda teoretičnih podlag za vprašalnik, vključno s pregledom meril in utemeljitev za vključevanje posameznih vidikov bivalnega okolja. Ker teh meril in utemeljitev primanjkuje, je to priložnost za obsežnejše raziskovanje. Poleg tega je treba pri razvoju novega vprašalnika pazljivo oblikovati postavke ter nato oceniti posplošljivost, strukturno in zunanjo veljavnost vprašalnika. Po izvedbi teh postopkov si je treba prizadevati za njihovo objavo, in sicer zaradi vsaj dveh razlogov: prvič, da bi druge raziskovalce obvestili o obstoju vprašalnika, ki bi jim potencialno lahko bil v pomoč, in, drugič, da bi prispevali k preglednejšemu empiričnemu raziskovanju, pri katerem je uporabljen zadevni vprašalnik. Enako bi bilo treba zagotoviti za prevode že obstoječih vprašalnikov. S sledenjem tem napotkom lahko po našem mnenju raziskovalci izboljšajo svoje delo in pomembno prispevajo k proučevanju zadovoljstva z bivalnim okoljem.

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Oblikovalski dejavniki v estetski presoji novozgrajenih okolij in njihova vključenost v zakonodajo: primer Istanbula

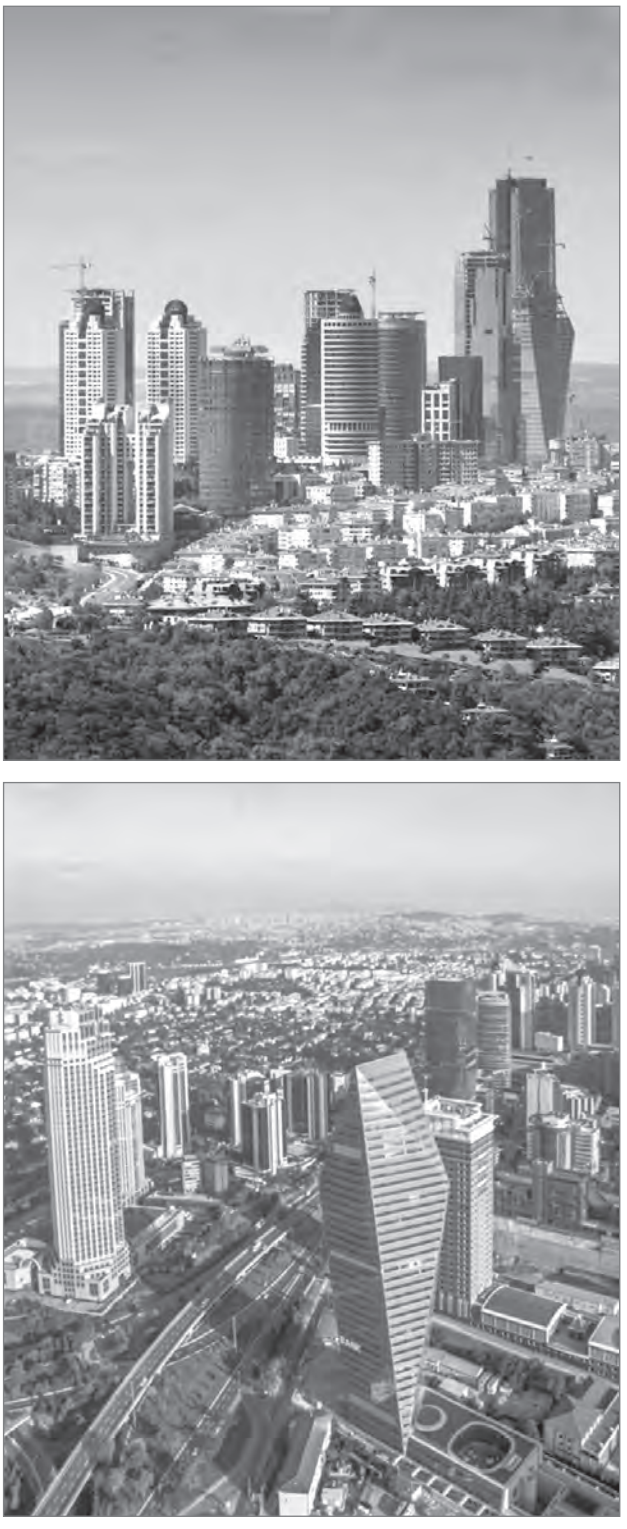
Novozgrajena okolja v mestih, katerih značilnosti so se spremenile zaradi neoliberalnih procesov in prednostnih odločitev, so pogosto predmet kritik zaradi pomanjkanja estetske kakovosti. Zaradi teh kritik postaja estetska presoja tovrstnih okolij čedalje pomembnejša, pri čemer se pojavljata ključni vprašanji, kako lahko take presoje opravimo in kako lahko njihova dognanja vključimo v zakonodajo. Avtorici članka obe vprašanji obravnavata na primeru Istanbula, pri čemer določata in razvrščata formalne estetske dejavnike na podlagi faktorske analize in analize variance izsledkov ankete, ki sta jo leta 2017 v Istanbulu opravili s tremi vzorčnimi skupinami (raziskovalci, oblikovalci in uradniki). Izsledki analiz kažejo, da se pri presojanju formalne estetike pogledi raziskovalcev razlikujejo od pogledov uradnikov in oblikovalcev. Poleg tega razkrivajo, da so značaj in identiteta, zelena gradnja in neujemanje identitete in grajenih oblik pomembni dejavniki, ki vplivajo na urbano formalno estetiko novozgrajenih okolij. Avtorici članek skleneta z razpravo o tem, kako bi lahko te dejavnike na primeru Istanbula vključili v zakonodajo.

Ključne besede: estetska presoja, novozgrajeno okolje, oblikovalski dejavniki, formalni estetski parametri, Istanbul, Turčija

1 Uvod

Študije, povezane z urbanim neoliberalizmom, kažejo, da so se zaradi neoliberalnih politik preoblikovali prostori v mestih po vsem svetu. Pod vplivom tovrstnih politik je konkurenčnost nujna za uspešen gospodarski razvoj mesta (Karaman, 2013). Mestni prostor je postal eden najbolj dobičkonosnih virov naložb, mesta pa uvajajo agresivne strategije trženja krajev, s katerimi želijo pritegniti čim več kapitala (Swyngedouw idr., 2002; Kuyucu in Unsal, 2010). Obsežni (mega)projekti, masovna stanovanjska gradnja ter gradnja nakupovalnih in poslovnih središč in hotelov s petimi zvezdicami so začeli preoblikovati mestna okolja (Kuyucu in Unsal, 2010; Özalp in Erkut, 2016). Novozgrajena okolja v mestih, katerih značilnosti so se spremenile zaradi neoliberalnih procesov in prednostnih odločitev, so pogosto predmet kritik zaradi pomanjkanja estetske vrednosti. Zaradi teh kritik postajajo razprave o urbani estetiki čedalje pomembnejše, ob tem pa se odpirata ključni vprašanji, kako lahko izvedemo estetske presoje novozgrajenih okolij in kako jih lahko vključimo v zakonodajo. Avtorici članka ti vprašanji obravnavata na primeru Istanbula. Iz raznih študij je razvidno, da je estetska presoja grajenega okolja odvisna tako od subjektivnih kot oblikovnih parametrov (Strenberg, 1991; Nasar, 1994). V raziskavi, obravnavani v tem članku, sta avtorici upoštevali samo formalne estetske parametre, pri čemer sta uporabili konkretnejša oblikovalska merila, ki jih je lažje vključiti v zakonodajo.

Istanbul je najpomembnejše gospodarsko, kulturno in turistično središče Turčije ter ima izjemno pomembno strateško lego na stičišču Evrope in Azije. To mesto je po vsem svetu znano po svoji naravni lepoti in spomenikih, ki so se ohranili iz obdobja, ko je bilo mesto prestolnica rimskega, bizantinskega in turškega imperija (Kuban in Yalçın, 2010). Od začetka 21. stoletja pa se mesto pod vplivom neoliberalnega režima temeljito spreminja (Lovering in Turkmen, 2011; Karaman, 2013), zlasti zaradi razcveta gradnje, ki pa je odvisen od dogajanja na nepremičninskem trgu (Balaban, 2012). Istanbul tako hitro izgublja svoj edinstven značaj (Barfu Candan in Ozbay, 2014). Zaradi neoliberalne politike, vzpostavljene na začetku 21. stoletja, se je mesto fizično povečalo, hkrati pa so se pojavile številne nove prostorske, družbene, okoljske in ekološke težave, povezane z nezakonitimi naselji (tur. *gecekondu*), masovno gradnjo visokih stanovanjskih stavb, megaprojekti in njihovo vključenostjo v mestno tkivo, javnim prevozom in prometom ter infrastrukturo in prenatrpanostjo posameznih območij. Prizadeta je bila tudi urbana estetika Istanbula, saj je razmah gradnje močno prizadel formalno estetiko mesta, zlasti njegovo silhueto (slika 1). Zato je treba določiti dejavnike, ki vplivajo na urbano estetiko novozgrajenih okolij v Istanbulu, na podlagi česar bi se lahko sprejela politika, ki bi pomagala izboljšati formalno estetiko mesta. Raziskava, obravnavana v tem članku, je lahko uporabna tudi za druga mesta, ki se spoprijemajo s podobno dinamiko gradnje.



Slika 1: Razmah gradnje v Istanbulu (vir: GYODER, 2015)

V naslednjem poglavju sledi pregled literature, povezane z urbano estetiko, v tretjem poglavju pa se avtorici osredotočata na

estetsko presojo grajenih okolij. V četrtem poglavju proučujeta oblikovalske dejavnike, ki se upoštevajo pri estetski presoji novozgrajenih okolij. Poglavje je razdeljeno na štiri podpoglavja: v prvem obravnavata zgradbo raziskave, v drugem podatke in postopek vzorčenja, v tretjem izsledke opravljenih analiz, v četrtem pa dejavnike estetske presoje novozgrajenih okolij, ki so že vključeni v zakonodajo. Članek končata s splošnim ovrednotenjem izsledkov in sklepi.

2 Pregled literature o urbani estetiki

Opredelitve, metodologije in kazalniki, uporabljeni v raziskavah urbane estetike, se med raziskavami razlikujejo, odvisno od raziskovalnega cilja. Kljub razlikam v pojmovanju se raziskovalci strinjajo, da je urbana estetika večdimenzionalen pojem. Kot razlaga Teymur (1981: 81), je izraz *estetski* pomensko vseprisoten. Uporablja se kot pridevnik, ki določa druge določevalne izraze, kot so kakovost, velikost, vrednost itd. Vsekakor je pozitiven pridevnik, ki nakazuje, da je nekaj dobro, lepo, prijetno, in ne slabo ali grdo. Estetski in estetika se nanašata tudi na cenjenje ali kritiko lepega, filozofijo ali znanost okusa ali zaznavanje lepote (Norton, 1967; Teymur, 1981). Tradicionalne opredelitve estetike se nanašajo na zaznavanje lepote v umetnosti ter lahko nakazujejo ekstremna in intenzivna občutja, kot je sublimnost (Nasar, 1997: 152).

Urbana estetika je subjektiven pojem, ki ga ni mogoče izmeriti (Sternberg, 1991: 70). Pehlivanoğlu (2011: 1) jo opisuje kot kompleksno prvino, ki mora vključevati več kot samo presojo fizičnih značilnosti mesta in pri kateri je treba upoštevati posameznikove izkušnje kot pomemben del kakovosti mestnega življenja. Nekateri avtorji menijo, da sta struktura in pomen osnova urbane estetike, drugi pa upoštevajo tudi pomen naravnega okolja, rabe zemljišč, prometnih tokov, grajene oblike in vedenjskih vzorcev ljudi. Skratka, naravo urbane estetike določajo razmerja med stavbami in okoljem, dobro strukturirani prostorski prehodi in skladnost (Erdoğan, 2006: 72; Xiangzhan, 2008: 63; Mowla, 2011: 169). Na podlagi teh parametrov poskušajo načrtovalci razumeti večdimenzionalno naravo urbane estetike.

Obstaja več načinov presojanja estetike na mestnih območjih. Nasar (1994: 382) na primer razlikuje med formalno in simbolno estetiko mesta. Prva vključuje parametre, kot so oblika, proporci, ritem, merilo, kompleksnost, barva, osvetljenost, osenčenost in hierarhija in ki se nanašajo na fizične značilnosti stavb. Simbolno estetiko pa opredeljujejo parametri, kot je človekovo doživljanje zunanjosti stavb, ki se določajo na podlagi vsebinskih spremenljivk, ki pa ne temeljijo samo na fizičnih značilnostih. V nekaterih raziskavah je vprašanje urbane estetike razdeljeno na dva dela: na arhitekturne vrednote in urbano estetiko (King, 1997). Arhitekturna estetika je bolj povezana s fizičnimi značilnostmi stavb in prostora okrog njih, urbana estetika pa obsega precej širši nabor dejavnikov, pogojev in meril, kot so gospodarstvo, promet in onesnaženost. Ti pojavi, ki niso vedno vidni, vplivajo na dojemanje mesta in imajo pomembno vlogo pri tem, kako ljudje zaznavajo estetiko. Med te spadajo tudi kulturne in družbene vrednote, ki jih družba ali skupnost vnaša na mestno območje (King, 1997). Kot navaja Onaran (1995: 24), je človekovo estetsko doživljanje okolice neločljivo povezano s pomenom, ki ji ga pripisuje, in vezmi, ki jih z njo oblikuje. Bistvo estetike torej temelji na pojmih estetskega subjekta, objekta in vrednosti. Estetski objekt se nanaša na naravno okolje, prostorsko maso, površino in silhueto mesta. Velikost, oblika, lokacija ter medsebojna oddaljenost in usmerjenost objektov pa vplivajo na estetsko vrednost mestnega prostora (Pehlivanoğlu, 2011: 11). Estetski subjekt je dejavnik, ki je na področju estetike okolja opredeljen kot stvar okusa. Podobno Nasar (1990) navaja, da je vrednotenje podobe mestnega okolja odvisno od človekovi bioloških potreb, njegove osebnosti, družbeno-kulturnih izkušenj, stopnje prilagodljivosti, ciljev in pričakovanj. Ker je vsak človek drugačen in imajo ljudje različna občutja, potrebe in zahteve, ki vplivajo na obliko, pomen in funkcijo kraja, se tudi različno poistovetijo s krajem in ga različno dojemajo. V eni izmed raziskav se je pokazalo, da proučevanje urbane estetike poteka na štirih ravneh (Alcock, 1993, navedeno v Pehlivanoğlu, 2011: 17), in sicer na ravni estetike razmerij, estetike načrta, umetniške estetike in družbene estetike. V tem okviru se estetika razmerij nanaša na opazovalčevo razmerje ali odziv na vidni dražljaj visoke estetske kakovosti, estetika načrta se navezuje na objektivno vrednost geometrijskih razporeditev oblik (npr. geometrijskih hierarhij), umetniška estetika se nanaša na abstraktno izražanje idej z urbanističnim oblikovanjem, družbena estetika pa se osredotoča na subjektivno doživljanje prostora (Pehlivanoğlu, 2011: 17).

Urbana estetika je večdimenzionalna in kompleksna prvina, ki se lahko presoja simbolno ali z vidika oblike (forme), pri čemer je treba hkrati s posameznikovimi izkušnjami, vedenjskimi vzorci ter subjektivnimi vidiki in pomeni proučiti tudi fizične značilnosti, naravno okolje, rabo zemljišč, prometne tokove in grajene oblike. Ker je namen raziskave, obravnavane v tem članku, proučiti urbano estetiko na način, ki bi ga lahko vključili v urbanistične zakone in predpise, so upoštevani samo formalni parametri estetike, saj se v zakonodajo lahko vključijo samo konkretnejši parametri. Zato so iz raziskave izključeni estetski dejavniki, kot so osebni okus pri presojanju estetike okolja, človekove biološke potrebe, osebnost, prilagodljivost, cilji, pričakovanja ter družbene, gospodarske in kulturne okoliščine in vrednote, ki jih družba vnaša na mestno območje; nobenega izmed teh dejavnikov namreč ne določajo izključno fizične značilnosti.

3 Estetska presoja grajenega okolja

V literaturi lahko zasledimo le malo raziskav, povezanih z estetsko presojo grajenega okolja, in čeprav so cilji večine teh raziskav zelo podobni, avtorji uporabljajo zelo različno metodologijo, s katero poskušajo opredeliti urbano estetiko.

Opravljenih je bilo več raziskav, povezanih z merjenjem estetske vrednosti grajenega okolja, ki temeljijo na zaznavanju (Strenberg, 1991; Pehlivanoğlu, 2011; Gomeshi in Mohd Jusan, 2013; Ahmad Nia idr., 2017; Gjerde, 2017). Ahmad Nia idr. (2017) so na primer proučevali estetske značilnosti mestnega prostora z morfološkega vidika, pri čemer so urbano estetiko določali na podlagi kronološkega pregleda širitve mesta skozi zgodovino. Avtorji so izbrali štiri soseske iz različnih obdobij rasti mesta, pri čemer so uporabili subjektivne in fizične parametre presoje urbane estetike. Iz njihove raziskave je razvidno, da se človekovo zaznavanje estetike mestnega okolja spreminja z njegovimi estetskimi vrednotami in značilnostmi. Gjerde (2017) je na podlagi anket, ki so jih izpolnili javnost ter oblikovalski in načrtovalski strokovnjaki, proučeval vizualne estetske zaznave mestne ulične krajine. Gomeshi idr. (2013) so raziskovali estetske preference arhitektov in nearhitektov pri oblikovanju pročelij stanovanjskih stavb. Pehlivanoğlu (2011) je proučeval zaznave, povezane z estetiko javnega mestnega prostora, pri čemer je upošteval razmerje med estetskim subjektom, objektom in vrednostjo.

Nekatere raziskave urbane estetike se osredotočajo na estetiko mestne krajine. Sahraoui idr. (2016) so proučevali mnenja o estetiki krajin, pri čemer so v anketi kot prostorske podatke uporabili niz merskih parametrov vidnosti krajin. Chen idr. (2009) so na podlagi celostne kvantitativne presoje proučevali estetsko vrednost zelenih mestnih prostorov, Cats-Baril in Gibson (1987) pa sta proučevala estetiko krajin ob pomoči strokovnjakov s področja oblikovanja.

Poleg zgoraj omenjenih raziskav so bile opravljene tudi druge raziskave, ki so se osredotočale na različne vidike urbane estetike. Çelik in Açıksöz (2017) sta na primer proučevala, kako se lahko trajnostna urbana estetika zagotavlja na podlagi oblikovalskih smernic. Crippen (2016) in Madanipour (1996) sta urbano estetiko proučevala s političnega vidika urbanističnega oblikovanja. Mokhtar (2007) je na podlagi primerjalne študije kritiziral neestetsko enoličnost sodobnih okolij, Nasar (1997) pa je na podlagi historiometrične raziskave in metode estetskega programiranja proučeval najnovejša dogajanja na področju estetike urbanističnega oblikovanja. Dimitrovska Andrews in Butina Watson (2001) sta kritično analizirali uspešne oblikovalske pobude za spodbujanje kakovostnega urbanističnega oblikovanja. V ta namen sta predlagali osnovna načela dobre urbane oblike na treh ravneh načrtovanja in oblikovanja: na ravni mestnega okolja in splošne kompatibilnosti (lokacija, raba zemljišč, značilnosti okolja ali mestnega tkiva, merilo), ureditve in zunanjih vplivov (razporeditev javnega prostora, kakovost fizičnega prostora in krajinsko urejanje okolice) ter arhitekture in izvedbenega načrta (najobčutljivejši del urbanističnega oblikovanja: vrste stavb, slog, pročelja/višina in materiali).

Iz pregleda literature je torej razvidno, da estetska presoja grajenega okolja navadno temelji na zaznavanju in presoji številnih vidikov mestnega okolja. Čeprav so v raziskavah proučeni najrazličnejši vidiki (npr. estetika pročelij stanovanjskih stavb, ulic, javnega prostora, krajine ali mestnih zelenih prostorov), so raziskovalni cilji običajno enaki. Uporabljena metodologija obsega študije primerov, določanje merskih parametrov in opredelitev oblikovalskih smernic za presojo estetske kakovosti. V raziskave so bili vključeni javni uradniki, oblikovalski in načrtovalski strokovnjaki, arhitekti in splošna javnost. Kot že omenjeno, je objavljenih raziskav, povezanih z estetsko presojo novozgrajenih okolij, katerih izsledki bi bili lahko vključeni v zakonodajo, malo.

4 Oblikovalski dejavniki estetske presoje novozgrajenih okolij

4.1 Zgradba raziskave

Raziskava je bila razdeljena v dve fazi. V prvi fazi sta avtorici določili oblikovalske dejavnike, ki se upoštevajo pri estetski presoji novozgrajenih okolij, in jih razvrstili na podlagi faktorske analize in analize variance (Anova). V drugi fazi sta proučili, kako bi lahko te dejavnike vključili v zakonodajo v primeru Istanbula.

Urbana estetika se večinoma nanaša na zunanjo podobo objekta in kraja v izbranem mestnem okolju, razporeditev stavb ter skladnost in ustreznost kompozicije. V različnih virih so bila določena različna oblikovalska načela, ki se uporabljajo za povečanje estetske kakovosti grajenega okolja (Porteous, 1996; Nasar, 1997; DETR, 2000; Taylor, 2009; Celik in Acıksoz, 2017). Med njimi so tudi oblikovalski parametri, ki jih je določilo britansko ministrstvo za okolje, promet in regije (DETR, 2000). Ministrstvo je te parametre opredelilo z vidika značaja (kraj s svojo identiteto), kontinuitete in ograjenosti (kraj, kjer so javni in zasebni prostori jasno razpoznavni), kakovosti javnega prostora (kraj s privlačnimi in priljubljenimi območji na prostem), preprostosti gibanja (kraj, ki ga zlahka dosežemo in skozi katerega se zlahka gibamo), čitljivosti (kraj, ki ima jasno podobo in ga je lahko razumeti), prilagodljivosti (kraj, ki se zlahka spreminja) in raznolikosti (raznolik kraj s pestro izbiro; DETR, 2000: 15). Ti parametri se uporabljajo kot smernice

Preglednica 1: Značilnosti skupin anketirancev

Značilnosti anketirancev	Raziskovalci (*n* = 60)	Oblikovalci (*n* = 37)	Uradniki (*n* = 40)	Skupaj (*n* = 137)
Spol				
ženski	42 (70 %)	25 (66 %)	24 (60 %)	91 (34 %)
moški	18 (30 %)	12 (34 %)	16 (40 %)	46 (66 %)
Starost				
25–30	13 (22 %)	10 (27 %)	6 (15 %)	29 (21 %)
30–35	8 (13 %)	16 (43 %)	13 (33 %)	37 (27 %)
35–40	1 (1 %)	1 (2 %)	14 (35 %)	16 (12 %)
40–45	13 (22 %)	5 (14 %)	7 (17 %)	25 (18 %)
> 45	25 (42 %)	5 (14 %)	0 (0 %)	30 (22 %)
Zaposlitev				
arhitekti	38 (64 %)	19 (51 %)	21 (53 %)	78 (57 %)
notranji oblikovalci	6 (10 %)	0 (0 %)	0 (0 %)	6 (4 %)
krajinski arhitekti	2 (3 %)	2 (5 %)	2 (5 %)	6 (4 %)
urbanistični načrtovalci	12 (20 %)	15 (41 %)	15 (37 %)	42 (31 %)
urbanistični oblikovalci	2 (3 %)	1 (3 %)	2 (5 %)	5 (4 %)
Dohodek (mesečni)				
2.500–3.000 TL	8 (14 %)	3 (8 %)	1 (3 %)	12 (9 %)
3.500–4.500 TL	8 (14 %)	10 (27 %)	1 (3 %)	19 (14 %)
4.500–5.500 TL	17 (28 %)	12 (32 %)	25 (62 %)	54 (39 %)
5.500–6.500 TL	10 (16 %)	4 (11 %)	10 (25 %)	24 (18 %)
> 6.500 TL	17 (28 %)	8 (22 %)	3 (7 %)	28 (20 %)

Opomba: TL pomeni turška lira.

za doseganje dobre prakse in učinkovito upravljanje. Avtorici sta pripravili vprašalnik, pri katerem sta upoštevali omenjene oblikovalske parametre in formalne parametre, ki sta jih našli v literaturi.

Vprašalnik vsebuje trideset vprašanj, s katerimi sta avtorici poskušali določiti oblikovalske dejavnike estetske presoje novozgrajenih okolij. Razdelili sta jih v tri skupine (podrobnosti so navedene v podpoglavju 4.2). Izsledke anket sta analizirali s statističnim programom SPSS 21, v katerega sta ročno vnesli zbrane podatke. Nato sta izvedli faktorsko analizo, s katero sta določili omenjene oblikovalske dejavnike, pri čemer sta upoštevali relativen pomen njihovih komponent.

4.2 Vzorčenje in podatkovna zbirka

Za jasno določitev oblikovalskih dejavnikov, ki se upoštevajo pri estetski presoji novozgrajenih okolij, sta avtorici potrebovali mnenje strokovnjakov s področja urbanističnega oblikovanja. Uporabljena terminologija splošni javnosti ali nestrokovnjakom ne bi bila razumljiva, zato sta izbrali tri skupine strokovnjakov, ki so sodelovali v anketi: raziskovalce, uradnike in praktike s področja urbanističnega oblikovanja. Zadnjenavedeni so v članku poimenovani s skupnim izrazom oblikovalci. Vsi anketiranci so živeli v Istanbulu in poznajo novozgrajena okolja v mestu, zlasti tista, zgrajena po letu 2010. Ker v raziskavo ni bilo mogoče vključiti vseh strokovnjakov s tega področja v Istanbulu, sta avtorici izbrali reprezentativni vzorec.

Raziskovalce sta izbrali na oddelkih za arhitekturo in oblikovanje istanbulskih univerz. Kot je navedeno na spletni strani sveta za visoko šolstvo (Council of Higher Education, 2017), je v mestu 50 univerz z 32 oddelki za arhitekturo, notranje oblikovanje, urbanistično oblikovanje in načrtovanje ter krajinsko arhitekturo. Avtorici sta izbrali 60 anketirancev, ki so zastopali 5 % vseh zaposlenih na teh oddelkih.

Drugo skupino anketirancev so sestavljali zaposleni v oblikovalskih birojih (oblikovalci). Avtorici sta izbor omejili na registrirane biroje v mestu. Po podatkih zbornic arhitektov, urbanistov in krajinskih arhitektov sta bila oktobra 2017 v mestu 102 urbanistična biroja, poleg teh pa še 2.506 arhitekturnih birojev in 21 krajinskoarhitekturnih birojev. Avtorici sta izbrali 37 anketirancev izmed 10 % vseh birojev.

Tretja skupina anketirancev je vključevala uradnike, zaposlene v občinskih upravah. Po podatkih spletne strani istanbulske metropolitanske občine je imelo mesto oktobra 2017 39

ODVISNE SPREMENLJIVKE					
Stavbna in oblikovalska raven (tridimenzionalne spremenljivke)		**Stavbna (oblikovalska) in načrtovalska raven** (dvo- in tridimenzionalne spremenljivke)		**Načrtovalska raven** (dvodimenzionalne spremenljivke)	
1	Velikost in kontinuiteta pozitivno vplivata na urbano estetiko.	13	Prevlada visokih stavb v silhueti mesta negativno vpliva na urbano estetiko.	19	Faktor izrabe gradbenih parcel neposredno vpliva na urbano estetiko.
2	Red in hierarhija pozitivno vplivata na urbano estetiko.	14	Neenotni stavbni gabariti negativno vplivajo na urbano estetiko.	20	Pravilna ulična mreža pozitivno vpliva na urbano estetiko.
3	Proporci, razmerja in ritem pozitivno vplivajo na urbano estetiko.	15	Razmerja med oblikami različnih skupin stavb pozitivno vplivajo na urbano estetiko.	21	Neusklajenost gradbenih parcel z identiteto okolice negativno vpliva na urbano estetiko.
4	Merilo in volumen pozitivno vplivata na urbano estetiko.	16	Enolična masovna stanovanjska gradnja negativno vpliva na urbano estetiko.	22	Neskladnost projektne gradnje s podrobnimi lokalnimi prostorskimi načrti negativno vpliva na urbano estetiko.
5	Ponavljajoč se arhitekturni motiv pozitivno vpliva na urbano estetiko.	17	Raznolikost in vizualna pestrost pozitivno vplivata na silhueto mesta.	23	Zelene površine in zasaditve pozitivno vplivajo na urbano estetiko.
6	Razmerje med pozidanim in praznim prostorom v uličnih pročeljih pozitivno vpliva na urbano estetiko.	18	Ekološko krajinsko načrtovanje pozitivno vpliva na urbano estetiko.	24	Povezava z glavnimi pešpotmi pozitivno vpliva na urbano estetiko.
7	Neskladnost pročelij z lokalnimi načrti rabe zemljišč negativno vpliva na urbano estetiko.			25	Neskladnost višine stavb in širine cest negativno vpliva na urbano estetiko.
8	Neskladnost oblike in strukture negativno vpliva na urbano estetiko.			26	Izključujoči in odmaknjeni objekti negativno vplivajo na urbano estetiko.
9	Usklajene barve stavb pozitivno vplivajo na urbano estetiko.			27	Razmerje med pozidanim in praznim prostorom pozitivno vpliva na urbano estetiko.
10	Neskladnost tekstur, vzorcev in materialov negativno vpliva na urbano estetiko.			28	Slabo varovanje naravnega okolja in ekosistemov negativno vpliva na urbano estetiko.
11	Oblikovanost notranjih prostorov vpliva na urbano estetiko.			29	Pravilna usmerjenost stavb pozitivna vpliva na urbano estetiko.
12	Uporaba ekoloških materialov pozitivno vpliva na urbano estetiko.			30	Oblikovanje urbane identitete na podlagi urbane estetike.

Slika 2: Odvisne spremenljivke (anketna vprašanja)

okrožnih občin in eno metropolitansko občino. Avtorici sta za raziskavo izbrali 40 anketirancev, po enega iz vsake občine. Značilnosti vseh treh skupin so navedene v preglednici 1.

Anketni vprašalnik je bil razdeljen na dva dela. Prvi del je vključeval vprašanja, povezana z značilnostmi posamezne skupine anketirancev, drugi del pa je bil sestavljen iz vprašanj, povezanih z urbano formalno estetiko. Večina vprašanj prvega dela je bila oblikovanih tako, da so anketiranci lahko ovrednotili parametre formalne urbane estetike, ki se lahko določijo samo na podlagi fizičnih značilnosti. Z njimi sta avtorici želeli določiti konkretnejše oblikovalske parametre na stavbni, oblikovalski in načrtovalski ravni, ki bi jih lahko vključili v zakonodajo. Ta del je bil razdeljen na tri dele in je vseboval vprašanja, ki so se nanašala na stavbno (oblikovalsko) raven (tridimenzionalne spremenljivke) in načrtovalsko raven (dvodimenzionalne spremenljivke; glej sliko 2). Anketiranci so morali označiti stopnjo strinjanja z navedenimi trditvami na petstopenjski Likertovi lestvici (5 – popolnoma se strinjam, 4 – strinjam se, 3 – niti se strinjam niti se ne strinjam, 2 – se ne strinjam, 1 – sploh se ne strinjam). S to metodo sta lahko avtorici oblikovalske dejavnike estetske presoje novozgrajenih okolij razvrstili po pomembnosti.

Prvih dvanajst vprašanj v drugem delu vprašalnika se je nanašalo na estetske parametre na stavbni (oblikovalski) ravni in na podatke o tridimenzionalnih značilnostih. Med njimi so bila vprašanja o velikosti, hierarhiji, redu, ritmu, proporcih, razmerju, merilu, volumnu, arhitekturnem motivu, razmerju med pozidanim in praznim prostorom, obliki pročelij, oblikovanosti notranjih prostorov, barvi, teksturi, vzorcih in materialih. Vprašanja št. 13–18 so se nanašala na formalne oblikovalske parametre na stavbni (oblikovalski) in načrtovalski ravni (vključevala so dvo- in tridimenzionalne spremenljivke)

Preglednica 2: Izsledki analize variance

Spremenljivke	Se strinjam		Se ne strinjam		Povprečja		
	n	%	*n*	%	Raziskovalci	Uradniki	Oblikovalci
1	55	40,1	68	49,7	2,40	3,62	3,24
2	79	57,7	42	30,6	3,85	2,72	3,08
3	84	61,3	36	26,3	3,91	2,92	3,35
4	69	50,4	44	32,1	3,78	2,32	3,02
5	34	24,8	55	40,2	3,10	2,35	2,62
6	62	30,3	50	36,5	3,20	2,90	2,94
7	108	78,9	12	8,7	4,23	3,90	4,10
8	111	81,0	12	8,8	4,26	4,20	3,91
9	61	44,5	40	29,1	3,41	3,05	2,86
10	103	75,8	10	7,3	3,98	3,85	4,38
11	35	25,6	72	52,6	2,30	2,80	2,89
12	66	48,2	40	29,2	2,90	3,72	3,43
13	121	88,3	6	4,3	4,43	4,45	4,16
14	123	89,8	9	6,6	4,36	4,65	4,18
15	77	56,6	14	10,3	3,81	3,56	3,27
16	110	80,3	12	8,8	4,33	4,02	3,94
17	72	52,6	38	27,7	3,88	2,70	3,10
18	97	70,8	17	12,4	3,98	3,82	4,08
19	113	82,5	7	5,1	4,21	4,27	4,05
20	45	33,1	44	32,3	3,31	2,89	2,51
21	114	83,2	6	5,8	4,20	4,15	4,21
22	105	76,7	9	6,5	4,25	4,17	3,86
23	102	74,5	16	11,7	4,20	3,80	4,02
24	94	68,6	24	17,5	3,46	3,95	3,91
25	114	83,2	10	7,3	4,13	4,45	4,35
26	98	71,6	13	9,5	4,05	4,05	3,97
27	88	64,2	31	22,6	3,91	3,25	3,40
28	119	86,8	7	5,1	4,20	4,37	4,56
29	78	56,9	32	23,4	3,30	3,77	3,72
30	104	75,9	17	12,4	4,30	3,90	3,86

ter so se osredotočala na najpomembnejše značilnosti novozgrajenih okolij v zadnjih letih, zlasti v Istanbulu: vplive prevlade visokih stavb, neenotne gabarite stavb, različne oblike stavb, raznolikost in ekološko krajinsko oblikovanje. Vprašanja št. 18–29 so se nanašala na načrtovalsko raven in so vključevala dvodimenzionalne spremenljivke: faktor izrabe gradbenih parcel, načrtovanje pravilnih uličnih mrež, skladnost identitete parcel in okolice, projektno gradnjo, zeleno gradnjo, prometne tokove in usmerjenost stavb. Zadnje vprašanje se je nanašalo na razmerje med urbano identiteto in estetiko (slika 2).

4.3 Izsledki analiz

Da bi ugotovili zanesljivost uporabljene merske lestvice, sta avtorici izvedli analizo zanesljivosti v programu SPSS, ki je bil razvit za ugotavljanje zanesljivosti in izvirnosti testov, anket in merskih lestvic. Izsledki te analize so izraženi s Cronbachovim koeficientom alfa (α), vrednost katerega je za opisanih 30 vprašanj znašala 0,808. Če je koeficient večji od 0,80 ali enak tej vrednosti in manjši od 1,00 ali enak tej vrednosti, je merska lestvica zelo zanesljiva (Kalayci, 2005: 405); analiza je torej pokazala visoko stopnjo zanesljivosti uporabljenega vprašalnika.

Izsledki analize variance (Anova) so pokazali, da so se anketiranci strinjali s 87 % vprašanj ali trditev. V preglednici 2 sta navedeni frekvenci odgovorov Se strinjam in Se ne strinjam za vsako anketno vprašanje. Na desni strani so prikazana mnenja vsake od treh skupin anketirancev. Iz analize je razvidno še, da raziskovalci drugače vrednotijo urbano formalno estetiko kot uradniki in oblikovalci.

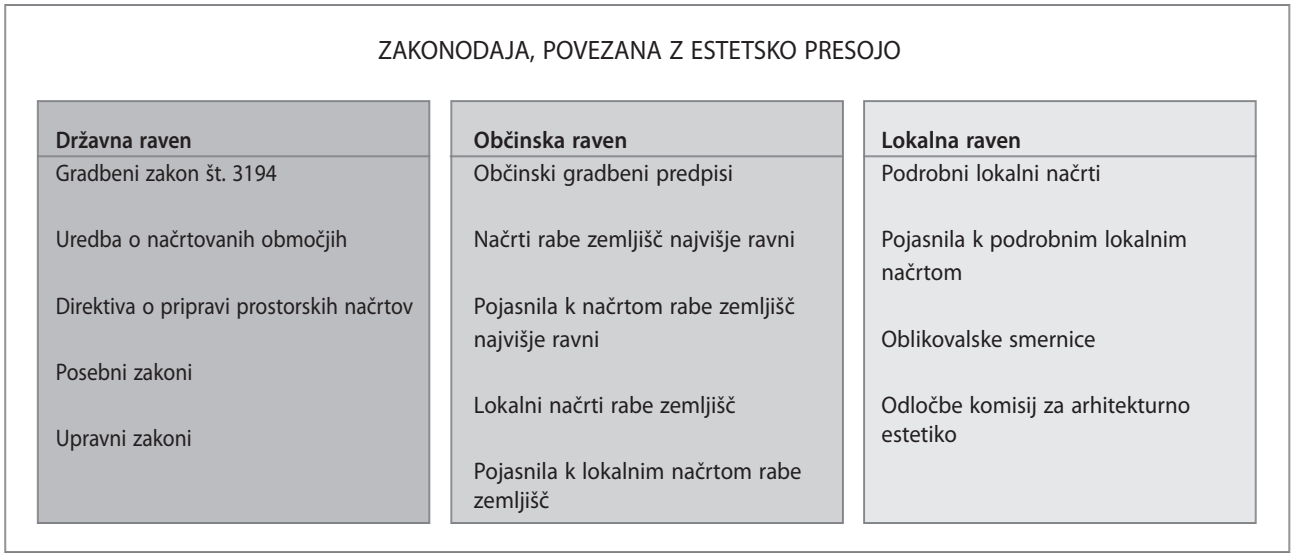
Preglednica 3: Dejavniki in parametri

Analizirani dejavnik	Vsebina dejavnika
D1 Značaj in identiteta	1. Proporci, delež, ritem
	2. Merilo in volumen
	3. Red, hierarhija
	4. Velikost in kontinuiteta
	5. Raznolikost in vizualna pestrost
	6. Razmerje med pozidanim in praznim prostorom v uličnih pročeljih
	7. Barvna usklajenost
	8. Arhitekturni motiv
	9. Urbana identiteta
D2 Zelena gradnja	1. Ekološko krajinsko načrtovanje
	2. Povezava z glavnimi pešpotmi
	3. Uporaba ekoloških materialov
	4. Pravilna usmerjenost stavb
	5. Zelene površine
D3 Neujemanje identitete in grajenih oblik	1. Neujemanje oblik objektov
	2. Faktor izrabe gradbene parcele
	3. Identiteta parcele in okolice
	4. Razmerja med teksturami, vzorci in materiali
	5. Enolična masovna stanovanjska gradnja
D4 Slabo varovanje kontinuitete in naravnega okolja	1. Razmerje med višino stavb in širino cest
	2. Slabo varovanje naravnega okolja in ekosistema
	3. Zaprti in odmaknjeni objekti
D5 Visoke stavbe	1. Razmerje med višino stavb in širino cest
	2. Vplivi prevlade visokih stavb
D6 Skladnost gradnje, ki temelji na sprejetih načrtih, in projektne gradnje	1. Neskladnost projektne gradnje s podrobnimi lokalnimi načrti
	2. Pravilna ulična mreža
D7 Usklajenost skupin stavb	1. Razmerja med oblikami različnih skupin stavb
D8 Notranje oblikovanje	1. Oblikovanost notranjih prostorov

Avtorici sta s programom SPSS opravili tudi faktorsko analizo, s katero sta želeli ugotoviti, kateri oblikovalski dejavniki so najpomembnejši pri estetski presoji novozgrajenih okolij. Cilj faktorske analize je zmanjšati količino podatkov ter povzeti in razvrstiti izbrane parametre za lažjo interpretacijo in razumevanje povezav in vzorcev (Yong in Pearce, 2013: 79). Za testiranje ustreznosti raziskovalnih podatkov za faktorsko analizo sta avtorici uporabili Kaiser-Meyer-Olkinovo mero vzorčne ustreznosti. Rezultat testa (0,772) je pokazal, da so podatki uporabni za faktorsko analizo.

Iz izsledkov faktorske analize, navedene v preglednici 3, je razvidno:

- prvi dejavnik (D1), imenovan značaj in identiteta, pojasnjuje 21,874 % skupne variance. Označuje fizične lastnosti stavb in je sestavljen iz opazovalnih meritev značaja in identitete grajenih okolij;
- drugi dejavnik (D2), imenovan zelena gradnja, pojasnjuje 13,599 % skupne variance. Označuje ekološke značilnosti, ki se upoštevajo pri načrtovanju in oblikovanju, in je sestavljen iz meritev na načrtovalski ravni, povezanih z okolju prijazno gradnjo;
- tretji dejavnik (D3), imenovan neujemanje identitete in grajenih oblik, pojasnjuje 9,294 % skupne variance. Nanaša se na značilnosti parcel, ki se upoštevajo pri načrtovanju in oblikovanju, ter vključuje meritve na načrtovalski in stavbni ravni;
- četrti dejavnik (D4), imenovan slabo varovanje kontinuitete in naravnega okolja, pojasnjuje 5,569 % skupne variance. Nanaša se na značilnosti parcel, ki se upoštevajo pri oblikovanju, in vključuje meritve grajenega okolja na načrtovalski ravni;
- peti dejavnik (D5), imenovan visoke stavbe, pojasnjuje 5,235 % skupne variance. Nanaša se na načrtovalske značilnosti grajenega okolja;
- šest dejavnik (D6), imenovan skladnost gradnje, ki temelji na načrtih, in projektne gradnje, pojasnjuje 4,176 % skupne variance. V Turčiji se urbanistično načrtovanje



Slika 3: Turška zakonodaja, povezana z estetsko presojo

Členi, povezani z urbanističnim oblikovanjem in urbano estetiko v zakonih in predpisih, ki se nanašajo na novozgrajena okolja v Istanbulu		
Zakoni in predpisi	Členi, ki se nanašajo na urbanistično oblikovanje in urbano estetiko	
Gradbeni zakoni in predpisi	Gradbeni zakon	Oblike, parcele in njihova razlastitev, prilagoditev zemljišč, oddaljenost stavb v ulici od roba ceste, velikost pročelij, višina stavb
	Uredba o načrtovanih območjih	Standardi glede velikosti parcel, oddaljenosti dvorišč od ceste, dimenzije stavb, pročelij, gradnje, vpliva pročelij na značaj območja, števila in višine nadstropij
	Direktiva o pripravi prostorskih načrtov	Standardi glede velikosti različnih območij, širine pešpoti in cest, oblikovalske smernice
	Gradbeni predpisi za Istanbul	Standardi glede oblik, oddaljenosti dvorišč od ceste, gradnje
Posebni zakoni	Okoljski zakon	Trajnostni razvoj, varovanje okolja
	Zakon o masovni stanovanjski gradnji	Zemljiške parcele in njihova razlastitev, trajnostni razvoj
	Zakon o spodbujanju turizma	Trajnostni razvoj, varovanje okolja
	Zakon o preobrazbi območij, ki jim grozijo naravne nesreče	Parcele, prilagoditev zemljišč, trajnostni razvoj, varovanje okolja
Upravni zakoni	Zakon o metropolitanskih občinah	Zagotavljanje skladnosti v okviru načrta, pročelja stavb, standardi glede ulic in bulvarjev ter velikosti in oblike oglasnih tabel
	Zakon o občinah	Standardi glede velikosti in oblike oglasnih tabel, posegih v prostor, gradnje hiš in pravilne urbanizacije
Drugi pravni instrumenti	Načela komisije za arhitekturno estetiko	Odločanje o tem, ali arhitekturni projekti izražajo izvirne ideje (v skladu z zakonom o obnovi lahko ustrezni organi na podlagi smernic, ki jih določi ministrstvo, ustanovijo komisijo za arhitekturno estetiko)
	Oblikovalske smernice	Oblika, parcele, širina ulic, silhueta mesta

Slika 4: Zakonski členi, povezani z urbanističnim oblikovanjem in urbano estetiko v Istanbulu

Pravni instrumenti, ki veljajo za Istanbul		Povezave med zakoni in predpisi ter osmimi ugotovljenimi dejavniki	
		Jih ni	Delna povezava
Gradbeni zakoni in predpisi	Gradbeni zakon	D2, D3, D4, D7, D8	D1, D5, D6
	Uredba o načrtovanih območjih	D3, D7, D8	D1, D2, D4, D5, D2, D6
	Direktiva o pripravi prostorskih načrtov	D1, D4, D7, D8	D2, D3, D5, D6
	Gradbeni predpisi za Istanbul	D7, D8	D1, D2, D3, D4, D5, D6
	Pojasnila k načrtom	D3, D4, D5, D6, D7, D8	D1, D2
Posebni zakoni	Okoljski zakon	D1, D2, D3, D5, D6, D7, D8	D4
	Zakon o masovni stanovanjski gradnji	D5, D6, D7, D8	D1, D2, D3, D4
	Zakon o spodbujanju turizma	D2, D3, D4, D5, D6, D7, D8	D1
	Zakon o preobrazbi območij, ki jim grozijo naravne nesreče	D3, D4, D5, D6, D7, D8	D1, D2
Upravni zakoni	Zakon o metropolitanskih občinah	D1, D3, D5, D6, D7, D8	D2, D4
	Zakon o občinah	D1, D3, D5, D6, D7, D8	D2, D4
Drugi pravni instrumenti	Načela komisije za arhitekturno estetiko	D2, D5, D6, D7, D8	D1, D3, D4
	Oblikovalske smernice	D7, D8	D1, D2, D3, D4, D5, D6

Slika 5: Povezave med zakoni in predpisi o novozgrajenih okoljih ter osmimi ugotovljenimi dejavniki v Istanbulu

izvaja na podlagi regulativnega načrtovalskega sistema. Čeprav se pri načrtovanju pogosto upošteva pravilna uličnа mreža, se zlasti po letu 2000 čedalje bolj krepi projektna gradnja, ki ne upošteva veljavnega načrtovalskega sistema (Ozkan in Turk, 2016). Dejavnik se nanaša na načrtovalske značilnosti grajenega okolja;

- sedmi dejavnik (D7), imenovan usklajenost različnih skupin stavb, pojasnjuje 3,942 % skupne variance in se nanaša na načrtovalske značilnosti grajenega okolja;
- osmi dejavnik (D8), imenovan notranje oblikovanje, pojasnjuje 3,857 % skupne variance in se nanaša na značilnosti stavb v grajenem okolju.

4.4 Oblikovalski dejavniki estetske presoje novozgrajenih okolij v veljavni zakonodaji

Iz izsledkov faktorske analize je razvidno, da je dejavnik značaj in identiteta najpomembnejši dejavnik, ki vpliva na urbano formalno estetiko. Sledijo mu dejavniki, kot so zelena gradnja, neskladnost grajenih oblik in identitete, slabo varovanje kontinuitete in naravnega okolja, visoke stavbe, neskladje med gradnjo, ki temelji na sprejetih načrtih, in projektno gradnjo, usklajenost različnih skupin stavb in oblikovanost notranjih prostorov. V nadaljevanju avtorici proučujeta, ali so ti dejavniki vključeni v veljavno zakonodajo.

Zakonodajo, povezano z estetsko presojo, lahko v Turčiji in Istanbulu razdelimo na tri ravni: državno, mestno in lokalno (glej sliko 3).

Zakonski členi, povezani z urbanističnim oblikovanjem in urbano estetiko, ki se nanašajo na zemljiške parcele, ceste, objekte in silhueto mesta, so povzeti na sliki 4. Povezave med zakoni in osmimi ugotovljenimi dejavniki so prikazane na sliki 5, na kateri so navedeni zakoni in predpisi, ki vsebujejo določbe, povezane s temi osmimi dejavniki. Hkrati so na njej nakazani pravni pristopi k reševanju težav, povezanih s temi dejavniki.

Na podlagi analize zakonodaje, povezane z novozgrajenimi okolji, ter primerjave slik 4 in 5 lahko ugotovimo, da večina pravnih instrumentov ponuja samo splošen opis dejavnikov. Na primer gradbeni zakon vsebuje samo nekaj splošnih določb glede merila, volumna, oblike pročelij, barvne usklajenosti in ekološkega krajinskega načrtovanja, ki se nanašajo na prvi dejavnik (značaj in identiteta). Nekateri drugi dejavniki se pojavljajo v direktivi o pripravi prostorskih načrtov (pod skupnim pojmom oblikovalske smernice) ter v posebnih in upravnih zakonih in drugih pravnih instrumentih. Kratke pojavitve opozarjajo na razdrobljenost določb, povezanih z urbano formalno estetiko, ki ne vsebujejo podrobnosti o tem, kako je treba razvijati urbano formalno estetiko novozgrajenih okolij. Na splošno bi lahko rekli, da ni podrobnih pravnih instrumentov, povezanih z urbano formalno estetiko.

5 Sklep

Pri preobrazbi mestnih prostorov pod vplivom neoliberalnih politik in prednostnih odločitev so spreminjajoče se mestne značilnosti predmet kritik zaradi pomanjkanja estetske kakovosti. To velja zlasti za obdobje po letu 2010, ko se identiteta in tekstura teh območij v načrtih ne upoštevata. Pojem urbane estetike zato postaja čedalje pomembnejši. Čeprav je bilo opravljenih mnogo raziskav urbane estetike, jih le malo obravnava urbano formalno estetiko novozgrajenih okolij. V raziskavi,

obravnavani v tem članku, sta avtorici na podlagi faktorske analize določili najpomembnejše dejavnike, ki vplivajo na urbano formalno estetiko. Hkrati sta razkrili, kateri dejavniki niso vključeni v zakonodajo in bi jih bilo treba dodati, da bi s tem ustrezno uredili urbano formalno estetiko v novozgrajenih okoljih. Iz primerjave teh dejavnikov na primeru Istanbula se razkriva razdrobljenost določb, povezanih z urbano estetiko, v zakonih in ugotoviti je mogoče, da so nekateri dejavniki v zakonodajo vključeni zelo pomanjkljivo.

Iz analize je poleg tega razvidno, katere parametre posameznih dejavnikov bi bilo treba vključiti v zakonodajo in koliko. Nekateri parametri so bolj splošni, drugi so podrobnejši, vse pa bi lahko v ustreznem obsegu vključili v državno, mestno in lokalno zakonodajo. D1 (značaj in identiteta), D2 (zelena gradnja), D4 (varovanje kontinuitete in naravnega okolja), D5 (visoke stavbe) in D6 (skladnost gradnje, ki temelji na načrtih, in projektne gradnje) se nanašajo na splošna vprašanja na državni ravni, ki bi jih bilo treba vključiti v gradbeni zakon in posebne zakone. Njihovi parametri, kot so proporci, merilo, hierarhija, velikost in raznolikost (D1), oblika objektov (D3) in razmerje med višino stavb in širino cest (D5), bi bilo treba vključiti v gradbeni zakon na splošni ravni, parametri, kot so razmerje med pozidanimi in praznimi površinami v uličnih nizih, usklajenost barv in arhitekturni motiv (D1), ekološko krajinsko načrtovanje, povezava z glavnimi pešpotmi, pravilna usmerjenost stavb, zelene površine in ekološki materiali (D2), razmerje med teksturo, vzorci in materiali (D3), razmerje med višino stavb in širino cest ter vpliv prevlade visokih stavb (D5), razmerja med različnimi skupinami stavb (D7) in oblikovanost notranjih prostorov (D8), pa bi morali biti predmet podrobnih lokalnih načrtov in njihovih pojasnil ter odločb komisij za arhitekturno estetiko na lokalni ravni. Parametri, kot so projektna gradnja, pravilna ulična mreža in skladnost projektne gradnje s podrobnimi lokalnimi načrti (D6), bi morali biti upoštevani v gradbenem zakonu. Podobno je enolična masovna stanovanjska gradnja (D3) aktualno vprašanje, ki bi ga morali reševati na državni ravni v okviru gradbenega zakona. Parameter varovanje naravnega okolja in ekosistemov (D4) bi lahko vključili v zakon o občinah na državni ravni. Urbana identiteta (D1), razmerje med parcelo in stavbo ter razmerje med identiteto parcele in okolice (D3) so vprašanja na mestni ravni, ki bi jih bilo treba dodati načrtom rabe zemljišč najvišje ravni, lokalnim načrtom rabe zemljišč, podrobnim lokalnim načrtom in njihovim pojasnilom. Najpomembnejše pa je, da so ti zakoni in predpisi med seboj usklajeni. Pomemben vidik zajemata tudi sposobnost ter raven načrtovalskega in oblikovalskega znanja strokovnjakov, ki sodelujejo pri načrtovalskih in oblikovalskih procesih. Tudi ti strokovnjaki morajo delovati usklajeno, zlasti pri podajanju navodil ter izvedbi in vodenju projektov. Kot je razvidno iz analize, se mnenja raziskovalcev pri presoji urbane formalne estetike razlikujejo od mnenj uradnikov in oblikovalcev.

Te cilje lahko dosežemo z upoštevanjem in uporabo navedenih dejavnikov v novozgrajenih okoljih na stavbni in načrtovalski ravni. Raziskava je razkrila veliko potrebo po preureditvi pravnih instrumentov, zlasti v primeru mest, kot je Istanbul – najpomembnejše turško gospodarsko, kulturno in turistično središče. Izsledki, pridobljeni na primeru tega mesta, so lahko uporabni tudi za druge države, katerih mesta se spoprijemajo s podobnimi dinamičnimi razvojnimi procesi.

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Kako neoliberalni globalizacijski procesi preobražajo vozlišča v Kijevu

Zaradi opustitve sovjetskih urbanističnih pristopov, liberalizacije povezane zakonodaje, zmede zaradi dajanja prednosti gospodarskim ciljem in pomanjkanja državne urbanistične strategije so ukrajinska mesta izpostavljena nenehnim spremembam. V članku avtorja analizirata trenutne funkcionalne in prostorske urbane preobrazbe, ki so posledica neoliberalnih globalizacijskih vplivov. Območja vozlišč v Kijevu so obravnavana kot središča največjih strukturnih sprememb, pri čemer avtorja z izbrano metodologijo proučujeta s tem povezane procese in njihove glavne značilnosti. Zaradi družbenega in zgodovinskega pomena nekatera vozlišča dobivajo večjo kulturno in simbolno vrednost, hkrati pa je na teh območjih opazen negativen vpliv nekaterih zgrešenih zamenjav prvotnih funkcij. Določenih je 44 vozlišč in šest vrst preobrazb glede na njihovo družbeno in kulturno vrednost. Kulturne, estetske, reprezentativne in komunikacijske funkcije na večini vozlišč nadomeščajo trgovska, storitvena in prometna raba. Izbrane študije primera kažejo velik pomen nadaljnjega sodelovanja javnosti pri reorganizaciji mestnega prostora v Kijevu.

Ključne besede: mestna zgradba, mestna vozlišča, neoliberalna globalizacija, funkcionalne in prostorske preobrazbe, Kijev

1 Uvod

Znanstveniki proučujejo procese svetovne gospodarske globalizacije in njene vplive na mesta že vse od leta 1915, ko je Patrick Geddes objavil prvo delo na to temo (Geddes, 1915). Jasno je, da so mesta ključni ustvarjalci in posnemovalci svetovnih sprememb ter hrbtenica svetovnega gospodarstva (Friedmann in Wolff, 1982; Friedmann, 1986; Hall, 1993; Sluka, 2007). Hkrati je mestno okolje prvi prejemnik svetovnih sprememb, vključno z nastajajočimi priložnostmi in izzivi (Sassen, 2016). Pri tržno naravnanem razvoju mest so naselja obravnavana le kot ekonomska sredstva, ki se jim lahko odvzamejo zgodovinski, družbeni in simbolni pomeni ter se pretvorijo v prodajljive potrošne dobrine (Balibrea, 2001; Short, 2004; Križnik, 2011, 2018). Ti neoliberalizacijski procesi že več kot tri desetletja preoblikujejo območja mestnega razvoja, njihove oblike in posledice pa se še naprej razvijajo na podlagi eklektične mešanice neuspehov in kriz, eksperimentiranja s predpisi ter prenosa politik med kraji, ozemlji in ravnmi (Peck idr., 2013).

Posebna vrsta mest v globalizaciji (Taylor, 2006) nastaja v postkomunističnih mestih, ki so izpostavljena procesom preobrazbe, te pa povzročata globalizacija in pojav tržnega gospodarstva (Mezentsev, 2015). Mestne krajine, ki so se izoblikovale med komunizmom, se preoblikujejo in prilagajajo novim razmeram, ki so posledica političnega, gospodarskega in kulturnega prehoda v kapitalizem (Sykora, 2009). Na podlagi morfologije, rabe zemljišč in socialne segregacije v teh mestih lahko določimo nekatera značilna kapitalistična mestna območja, ob njih pa lahko v mestni krajini najdemo tudi predele, ki so kot zamrznjene podobe komunizma (Sýkora in Bouzarovski, 2012).

V postkomunističnih državah, vključno z Ukrajino, svetovni trendi prekrivajo številne notranje značilnosti, od katerih mnoge veljajo za ostanke prejšnjega režima. Ta kompleksni mozaik še krepi podobo preobražanja mestne krajine in otežuje ohranjanje njene privlačnosti, hkrati pa poskuša doseči čedalje večji funkcionalnost in inovativnost. V družbenopolitičnem pogledu gre za nepopoln prehod od togega načrtovanja predpisov in smernic k načrtovanju, značilnemu za konkurenčno poslovno okolje (Maruniak, 2007). Kot glavno mesto in največja metropola v državi Kijev vsrka največ svetovnih vplivov v Ukrajini, zato je še posebno zanimiv za proučevanje tovrstnih preobrazb. Za proučevanje preobrazb, ki trenutno potekajo v Kijevu, sta avtorja izbrala posebno prvino mestne zgradbe: mestna vozlišča. To so območja, ki imajo v zgradbi mesta vodilno vlogo, saj so na njih zgoščeni procesi in funkcije, ki so ključni za vsakodnevno življenje v mestu. Ti mestni prostori imajo neposreden vpliv na nastajajočo prostorsko identiteto mesta. Ker so privlačni za razne dejavnosti, se nenehno spreminjajo in so ranljivi, zaradi česar pogosto izgubijo svojo pristnost ter družbeno in kulturno vrednost.

V nadaljevanju so najprej navedeni teoretične podlage in metodološki pristopi, ki se uporabljajo za določanje mestnih vozlišč in njihovih preobrazb pri neoliberalnem razvoju mest. Avtorja sta nato na bolj praktični ravni določila območja vozlišč v Kijevu, pri čemer sta upoštevala njihove preobrazbe. Ob tem sta oblikovala prostorski model funkcionalnih in prostorskih oblik in vzorcev. Na koncu sta te spremembe ponazorila s študijami izbranih primerov, na podlagi katerih lahko urbanisti spoznajo, kako neoliberalne preobrazbe vplivajo na mestni prostor in kako lahko sodelovanje javnosti pomaga pri sprejemanju odločitev, povezanih s preživljanjem mestnih prebivalcev in razvojem mesta.

2 Teoretično ozadje

2.1 Mesto in svetovne neoliberalne preobrazbe

V zgodnjih delih kritičnih geografov in sociologov, kot so Lefebvre (1968, 1970, 1974), Jacobs (1961, 1970), Foucault (1967), Harvey (1973) in Castells (1977), je prostor obravnavan kot družbeni produkt. Poudarek je na dejstvu, da se na področju urbanizma trenutno pogosto daje prednost gospodarskim koristim, brez upoštevanja potreb lokalnih prebivalcev. V raziskavi postmoderne urbanizacije Soja (2008) ugotavlja, da mestni prostor ustvarja inovativnost, ustvarjalnost in gospodarsko rast, hkrati pa vzpostavlja dodatno hierarhijo, neenakost, socialno polarizacijo in nepravičnost.

Mesta so zaradi globalizacijskih vplivov vključena v procese svetovne konkurenčnosti (Salvati in Zitti, 2017). Marcuse in Van Kempen (2000) sta začela razpravo o družbenih in prostorskih posledicah te vključenosti, ki spreminja gospodarske in kulturne funkcije mesta ter hkrati preoblikuje koncept urbanizma. Namen urbanizma je predvsem ustvarjanje ugodnega poslovnega okolja ter preoblikovanje mestnega prostora in njegovih pojavnih oblik v smislu njegove arhitekture, podobe in dojemanja, kar naj bi zagotovilo doseganje nekaterih standardov, na podlagi katerih lahko mesto privablja mednarodni kapital (Taylor idr., 2007, 2010). Čeprav mesta opravljajo najrazličnejše funkcije in naloge, od verskih do vojaških, so v procesu globalizacije podrejena eni glavni funkciji: spodbujanju centralizacije kapitala (Trubina, 2011). V tem pogledu ima proces globalizacije v zadnjih desetletjih izjemen vpliv pri pojasnjevanju sprememb v mestih.

Po Harveyju (1973, 1989) so številni kritični geografi proučevali nove strukture upravljanja v urbanizmu in vpliv nepremičninskega trga na neoliberalen razvoj mest (Jessop, 1997;

Peck in Tickell, 2002; Brenner in Theodore, 2002, 2003; Peck idr., 2013; Brenner in Schmid, 2014; Peck idr., 2017). Izsledki raziskave, ki so jo opravili Swyngedouw, Moulaert in Rodriguez (Moulaert, 2000; Moulaert idr., 2001a, 2001b; Swyngedouw, 2002), so pomembni za temo, obravnavano v tem članku. Pri analizi nedavnega dogajanja v evropskih mestih so avtorji te raziskave izdelali nov teoretični model sodobnih neoliberalnih procesov urbanizacije. Ugotovili so povezave med tremi pojavi, ki spreminjajo potek razvoja mest: med neoliberalno ekonomsko državno politiko, povezano z liberalizacijo, deregulacijo in privatizacijo trga, novo urbano politiko, pri kateri povezovanje javnega in zasebnega sektorja ter političnih in ekonomskih razvojnih smernic sega na področje načrtovanja in razvoja mest, ter urbanističnimi projekti, ki odkrivajo nove gospodarske potenciale in ustvarjajo zaslužek. Hkrati je velik del prebivalcev, na katere ti projekti vplivajo, izključen iz načrtovalskih in upravljavskih procesov, kar vodi v socialno-prostorsko polarizacijo. Glavni cilj teh urbanističnih pobud je pobirati najemnino od novo zgrajenih nepremičnin in ločiti urbanizem od socialne gradnje (Al-Hamarneh, 2011). Mnoga mesta v nekdanjih državah Sovjetske zveze so začela ta načrtovalski pristop pri svojih praksah upravljanja mest uporabljati takoj po razpadu Sovjetske zveze.

Neoliberalizem se na splošno priznava kot prevladujoča ideologija postkomunizma (Pickles in Smith, 1998; Birch in Mykhnenko, 2010; Stenning idr., 2010). Golubchikov idr. (2013) postkomunistična mestna gospodarska območja pojmujejo kot hibridne prostore, ki vključujejo tako prvine neoliberalizma kot ostanke komunizma. Trdijo, da so bili ostanki komunizma odtrgani od svoje zgodovine in spremenjeni v infrastrukturo neoliberalizma. Sistematizacijo teh procesov preobrazbe v postkomunističnih mestih v okviru globalizacije obravnavajo številna dela, vključno s publikacijami ruskih in slovaških geografov, ki proučujejo vpliv teh procesov v različnih delih mesta, tudi z vidika odnosa med mestnim središčem in obrobjem (Sluka, 2009), ter glavnih morfoloških, funkcionalnih in socialno-demografskih značilnosti (Matlovic idr., 2009).

V zadnjih letih so spremembe mestnega prostora pod vplivom neoliberalnih globalizacijskih procesov pritegnile pozornost ukrajinskih raziskovalcev. Vplive globalizacije na različne vidike razvoja mest so proučevali Maruniak (2007, 2013), Mezentsev idr. (2012, 2015) ter Mezentseva (2017). Maruniak (2013) obravnava izzive, s katerimi se srečujejo posovjetska mesta v Ukrajini: izrazito socialno hierarhijo, prenasičenost z informacijami in komunikacijami, čedalje večjo prisotnost svetovnih akterjev, izgubo izvirnosti mestne krajine, krepitev multikulturnosti mestnega okolja, pospešene spremembe in dejavnike, ki ogrožajo trajnostni razvoj. Med procesi, ki najbolj vplivajo na spremembe mestnega prostora, so agresivna privatizacija, komercializacija, fragmentacija funkcij, terciarizacija, socialna polarizacija in prostorska segregacija (Mezentsev in Mezentseva, 2012). Teoretične podlage proučevanja svetovne neoliberalne urbanizacije ter okoliščine in preobrazbe, značilne za Kijev, so obravnavali Al-Hamarneh idr. (2013) in Dronova idr. (2013, 2018). Težave in obete, povezane z razvojem ukrajinskega glavnega mesta, je analiziral Nudelman (2015), postindustrijsko preobrazbo največjih ukrajinskih mest pa je proučeval Pidgrushnyi (2015). Navedeni avtorji se osredotočajo na trenutne razmere, povezane z lastništvom zemljišč in nepremičnin v Kijevu, ter na zamenjavo tradicionalnih urbanističnih vprašanj v klasičnem smislu strukture in kompozicije (Sosnova, 2011; Nudelman, 2013; Dronova in Poleshko, 2017).

2.2 Določanje mestnih vozlišč

Zaradi sprememb, povezanih z globalizacijo, so preobrazbe mestnega prostora najbolj opazne na območjih mestnih vozlišč. Pred več kot petdesetimi leti je Kevin Lynch vozlišča opredelil kot vodilno prostorsko prvino na mentalnem zemljevidu mesta oziroma kot strateške točke, na katere lahko opazovalec prosto vstopa. Vozlišča so križišča ali mesta, na katerih so zgoščene nekatere posebne značilnosti. V predstavah ljudi imajo večinoma obliko strnjenih točk, v resnici pa gre lahko za prostorne trge ali razširjene linearne prostore in celo predele v središču mesta. Z vidika ozemlja na najvišji hierarhični urbani ravni (nacionalni ali svetovni) je vozlišče lahko tudi sámo mesto (Lynch, 1960). Lynchev pogled razkriva humanistično smer zaznavanja. Vizualno zaznavanje omogoča nove poglede, koristne za proučevanje novih strategij urbanističnega oblikovanja in zagotavljanje različnih načinov, na katere si lahko prebivalci zamislijo življenje in dobro počutje v mestu (Morello in Ratti, 2009). Od petih ključnih prostorskih prvin, ki jih je opredelil Lynch (te so povezave, robovi, predeli, vozlišča in poudarki), so bile tri (povezave, vozlišča in robovi) prepoznane kot izjemno pomembne s fizičnega, zaznavnega in psihološkega vidika (Stevens, 2006). Podobno tudi Norberg-Schulz (1971, 1980) navaja, da te tri prvine niso samo kognitivne, ampak tudi vedenjske. So eksistencialne: urejajo človekova bivališča v krajini na vseh ravneh in so temeljne topološke prvine prostora z vidika gibanja in vidnosti, saj določajo kontinuiteto (*povezave*), izbiro (*vozlišča*) in ograjenost (*robovi*).

Lynchu in njegovemu temeljnemu delu so nato sledile številne raziskave, v katerih so avtorji ugotavljali, da si lahko nekatere mestne prvine lažje zapomnimo ali da so lažje razpoznavne (ang. *imageable*), ker vsebujejo nekakšen osebni, zgodovinski ali kulturni pomen, in ne zaradi njihove vizualne podobe (Appleyard, 1969; Golledge idr., 1978). Na primer, geometrijska oblika ali vizualna podoba majhne hiše morda ne izstopa iz okolice, ljudje pa si hišo vseeno zapomnijo, ker je v njej živela slavna oseba; hiša tako zaradi svojega pomena ali

semantike postane znamenitost (Jiang, 2012). Stevens (2006) je oblikoval tudi celostni robustni model morfologije mesta s fenomenološkega in vedenjskega (behaviourističnega) vidika. Križišča (vozlišča) je opredelil kot kraje izostrenega zavedanja in odločanja, na katerih se ljudje upočasnijo ali ustavijo ter odločajo, kaj bodo naredili v naslednjem trenutku in kam bodo šli. S tem določijo načrt svoje poti, čeprav ne vedno na pragmatičnih osnovah. Križišča ponujajo razširjeno vidno polje in odpirajo nove možnosti za doživetja in smeri gibanja. Na križiščih lahko ljudi neka stvar odvrne od njihovega glavnega namena. Avtorja tega članka predpostavljata, da imajo funkcionalna in estetska okolja vozlišč pomembno vlogo pri ustvarjanju občutka kraja.

3 Metode

V nadaljevanju so povzeti izsledki raziskave vozlišč v Kijevu, ki sta jo avtorja opravila v zadnjih nekaj letih, pri čemer sta proučevala njihovo dediščino, delovanje in razporeditev dejavnosti v obdobju Sovjetske zveze in po osamosvojitvi Ukrajine. Posebno pozornost sta namenila spremembam funkcij in mestnega prostora, ki so bile posledica vpliva neoliberalnih in svetovnih tokov, zlasti procesom komercializacije in terciarizacije, pojavu poslovnih in nakupovalnih središč ter sedežev nadnacionalnih korporacij in mednarodnega kapitala ter posledičnemu preoblikovanju javnega prostora. Metode, ki sta jih pri raziskavi uporabila, so vključevale vizualno opazovanje, metode družbene geografije (npr. statistične, primerjalne geografske, grafične in kartografske metode) in zgodovinske metode. S kombinacijo teh metod sta oblikovala prostorski model vozlišč v Kijevu ter analizirala in ovrednotila njihove preobrazbe.

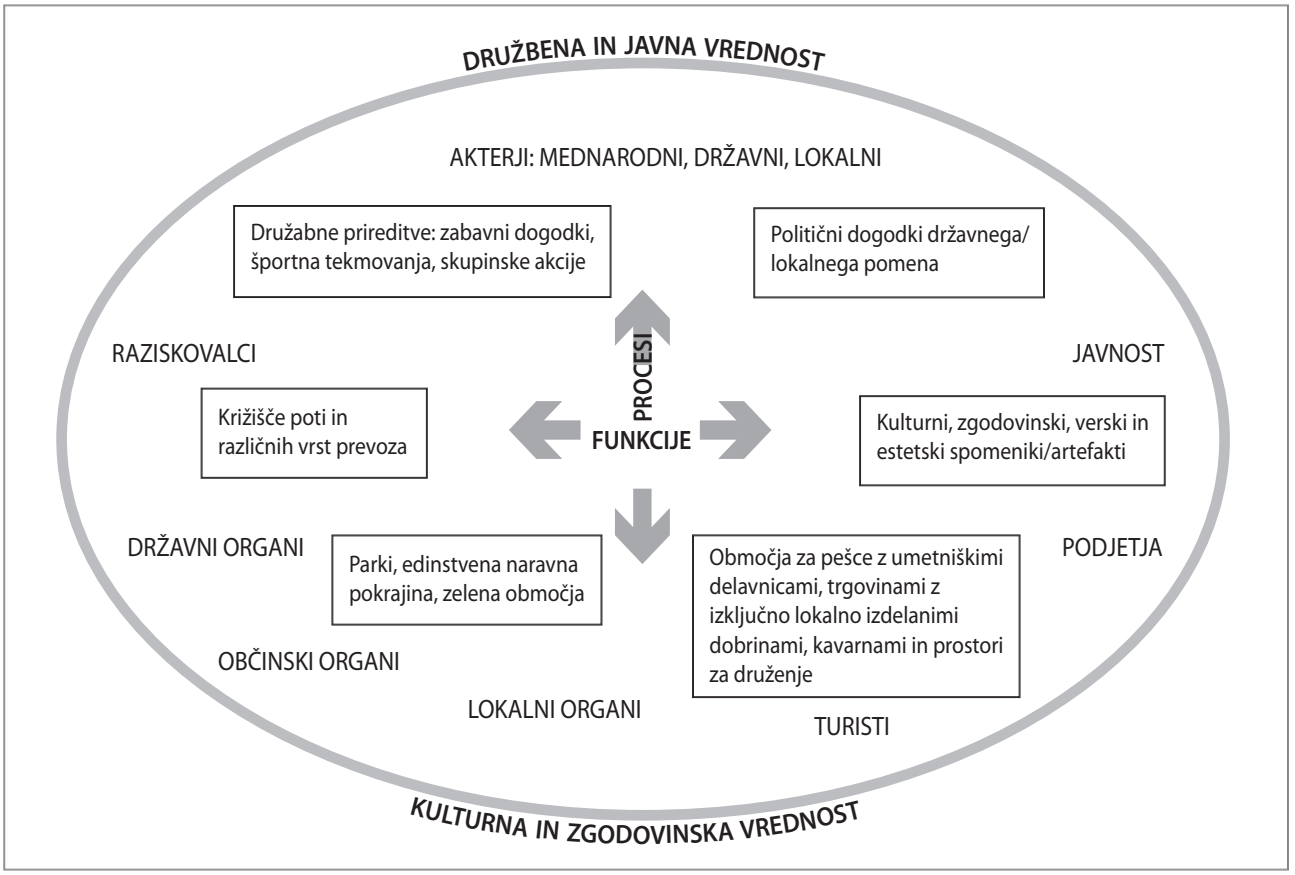
Raziskavo sta izvedla v več fazah. Najprej sta zbrala terenske podatke, pri čemer je bil poudarek na lokaciji vozlišč ali natančneje na njihovih arhitekturnih rešitvah, prvotnih funkcijah in preobrazbah. V naslednji fazi sta zbrala znanstvene in statistične dokumente, zemljevide in fotografije iz obdobja Sovjetske zveze in po njem, ki so vsebovali podatke o načrtovalskem sistemu. Poleg tega sta proučila tudi kvantitativne in funkcionalne parametre posameznih delov mesta. V tretji fazi sta proučila razne javne listine, opredelila območja vozlišč in določila merila za izbor vozlišč za poglobljeno analizo. Analizirala sta procese preobrazbe vozlišč s poudarkom na spremembah njihovih socialnih in kulturnih funkcij. V tej fazi sta vozlišča tudi razvrstila glede na vrsto njihove preobrazbe, hkrati pa sta izvedla poglobljene in podrobnejše študije območij z največjim družbenim pomenom.

V skladu z Lynchevo opredelitvijo vozlišč jih avtorja razumeta kot kraje ali strateške točke mesta, ki so prosto dostopne, so večinoma na križiščih pomembnih poti, na njih je zgoščeno veliko mestnih funkcij, zanje pa so značilni tako centripetalni kot centrifugalni tokovi. Ta križišča prometnih poti so zlasti pomembna za mestne prebivalce, saj se prehod od ene vrste prevoza k drugi lahko dojema kot premikanje od ene strukturne prvine k drugi. Koncept vozlišča je zelo podoben konceptu prometnega središča, ki se obravnava kot točka, kjer se združujejo različne vrste prometa, potniki in dobrine pa prehajajo od ene vrste prevoza k drugi.

V tem okviru so lahko mestna vozlišča mestni trgi ali križišča pomembnih prometnih poti v mestu, kjer so nekatere ulice ključne za delovanje mesta. Pomembnih vozlišč ne tvorijo samo prometne povezave; primerno je začeti pri pojmu procesnih vozlišč, ki ponazarjajo minevanje, potekanje ter logično in posledično spreminjanje dogodkov, pogojev in faz razvoja. »Geoprostorski procesi so procesi interakcije med geografskimi objekti na nekem ozemlju, ki se razvijajo v času« (Alaev, 1977: 159). Zaradi koncentracije procesov, ki so ključni za življenje v mestu in mestne funkcije, imajo mestna vozlišča vodilno vlogo v urbanistični zgradbi mesta. To so območja, kjer se križajo materialne in duhovne poti, prometni tokovi, ljudje ter informacijske in komunikacijske povezave, se zgoščajo interesi predstavnikov različnih oblik lastništva ter nastajajo in se rešujejo konflikti. Pojav teh križišč procesov povzroča zgoščanje prometnih, kulturnih, gospodarskih, socialnih, upravnih, komunikacijskih in storitvenih funkcij.

Običajno se prvine mentalnega zemljevida mesta določajo na podlagi intervjujev s prebivalci. Zaradi napredka računalniške tehnologije se lahko podoba mest proučuje tudi kvantitativno, na podlagi rezultatov anket. Določanje sintaktične podobe mesta lahko tako temelji na raziskavi prostorske sintakse (Dalton in Bafna, 2003) ali na tridimenzionalnih digitalnih posnetkih (Eugenio in Ratti, 2009). Jiang (2012) poroča, da lahko podobo mesta samodejno kvantitativno izpeljemo z uporabo računalniške tehnologije in geoprostorskih podatkovnih zbirk. To je mogoče, ker je mesto živa struktura, ki vsebuje sebi lastno hierarhijo artefaktov. Tako lahko čitljivost (ang. *legibility*) in razpoznavnost (ang. *imageability*) mestnih artefaktov merimo tako, da posamezne mestne artefakte razvrščamo na podlagi pomenskih, topoloških in geometrijskih podatkov. Čeprav je ta pristop uporaben, je sprejemljiv samo pri materialnih artefaktih mesta. Zgoraj omenjene procese in funkcije lahko zato veliko bolje ocenimo s kvalitativnimi kot kvantitativnimi metodami.

Ob upoštevanju vseh zgodovinskih, gospodarskih in prostorskih dejavnikov ter družbenih interesov in gibanj v vsakodnevnem mestnem življenju ter na podlagi analize temeljnih značilnosti mest (glej Lappo, 1997) sta avtorja določila naslednje družbenogeografske značilnosti, ki določajo mestna vozlišča:



Slika 1: Logičen prikaz koncepta mestnega vozlišča (ilustracija: Olena Dronova)

dostopnost območij za pešce, prometna dostopnost, dobro razvita logistika, zgodovinska slojevitost, specializiranost dejavnosti, dinamično delovanje in deloma dinamični razvoj, izpostavljenost globalizacijskim vplivom, posebna privlačnost za različna področja (zasebnih in javnih) dejavnosti, vodilni družbeni pomen, samorazvoj in verjetnost konfliktov.

V tem pogledu Lynch (1960) razlikuje med dvema vrstama vozlišč: med tistimi ob glavnih križiščih in tistimi, ob katerih se zgošča neka dejavnost. Glede na namen znanstvene ali načrtovalske raziskave pa tovrstno razlikovanje lahko ne pove dosti (Dalton in Bafna, 2003). Za boljše razumevanje vrst mestnih vozlišč je pomembno upoštevati njihovo prevladujočo družbeno in javno vrednost. Določajo jih naslednja merila:

- območja, kjer se križajo različne vrste prevoza;
- območja, na katerih pogosto potekajo pomembni politični dogodki državnega ali lokalnega pomena (organizirano ali spontano);
- območja, na katerih potekajo večje zabavne, športne in družabne prireditve, predstave in skupinske akcije (ang. *flash mob*);
- prisotnost kulturnih, zgodovinskih, verskih in estetskih spomenikov, artefaktov, stavb in objektov;
- prisotnost območij za pešce z umetniškimi delavnicami, trgovinami z izključno lokalno izdelanimi dobrinami, kavarnami ter prostori, namenjenimi druženju, rekreaciji in sprostitvi;
- območja, na katerih se parki in prvine edinstvene naravne krajine prepletajo z mestno krajino.

Nekatera vozlišča se razvijejo iz območij, kjer so se ljudje tradicionalno srečevali, iz tržnic ali pa nastanejo kot središča načrtovalskih območij mesta. Nekatera imajo vlogo poduhovljenja in so podobna duhovnim središčem mest (Mumford, 1961). Obsegajo zgodovinska središča mest, območja, ki se jih ljudje spominjajo zaradi dogodkov, ki so se tam zgodili, in trge, ki izstopajo zaradi koncentracije verskih, kulturnih in izobraževalnih ustanov ter arhitekturnih kompozicij visoke estetske vrednosti. Bolj ko je vozlišče posebno, bolj si ga zapomnimo (Haken in Portugali, 2003; Hospers, 2010). Teoretično bi morala vozlišča zaradi svojega družbenega, zgodovinskega ali arhitekturnega pomena pridobiti dodatno kulturno in simbolno vrednost (slika 1). Teoretično bi bilo treba kulturno in simbolno vrednost ohranjati in vzdrževati na podlagi skupnih prizadevanj občinskih organov in javnosti. Vloge javnosti, nevladnih organizacij in lokalnih skupnosti ne smemo zanemarjati. Na primeru nekaterih vozlišč lahko vidimo, kako javnost učinkovito onemogoča proces njihovega kaotičnega razvoja ter poskuša ohraniti njihovo edinstveno podobo in vrednost.

Za mnogo primerov so prebivalci območij mestnih vozlišč zaskrbljeni zaradi njihove arhitekturne podobe in stabilnosti. To je na primer razvidno iz dogajanja v postkomunističnih ukrajinskih mestih. Na območjih, kjer se zgoščajo funkcije in procesi, je v očeh javnosti najopaznejši proces trajne zamenjave in posledične reorganizacije teh funkcij. Pod vplivom neoliberalnih in globalizacijskih procesov postajajo mestna vozlišča najprivlačnejša območja za razne poslovne dejavnosti, ob nenehnem spreminjanju akterjev in prednostih nalog pa so to hkrati območja najbolj dinamičnega razmišljanja. Na celotnem mestnem ozemlju so ta območja najbolj izpostavljena trajnim globalizacijskim spremembam. V tem pogledu je vredno omeniti, da njihov kulturni in arhitekturni simbolizem nosi odgovornost za prikaz tako njihove edinstvenosti kot ozemeljske identitete.

4 Analiza vozlišč v Kijevu in njihovih glavnih preobrazb

Zaradi prehoda iz komunističnega v postkomunistični politični režim in tržno gospodarstvo so glavna vozlišča ukrajinskega glavnega mesta doživela največ sprememb. Večina mestnih trgov je tradicionalno opravljala trgovske in poslovne funkcije ter se uporabljala kot javni prostor, na katerem so se prebivalci lahko združevali in sporazumevali. Danes pa je velika večina teh trgov izgubila svoje prvotne funkcije in se uporablja le kot prestopne postaje med različnimi vrstami prometa. Na podlagi zgoraj opisanih ekonomskih, družbenih, zgodovinskih in okoljskih meril sta avtorja določila 44 vozlišč v Kijevu; 34 je že obstoječih vozlišč, deset območij pa ima značilnosti, zaradi katerih bi jih lahko obravnavali kot vozlišča (preglednica 1, slika 2). Prilagoditev mestne rabe zemljišč novim družbenim razmeram in prostorskim preobrazbam poteka po vsem mestu (Sýkora in Bouzarovski, 2012). Vsa vozlišča opravljajo funkcije prostorov vzdolž glavnih prometnih poti in križišč ter reprezentativne, komunikacijske, storitvene in trgovske funkcije. Zadnji dve funkciji sta vodilni na vseh vozliščih in včasih celo zamenjata reprezentativno, kulturno-estetsko in rekreativno funkcijo.

Raziskava je potrdila, da so glavni pojavi, ki spreminjajo mestne procese in funkcije ter kazijo prostorsko strukturo vozlišč, komercializacija, vertikalizacija, poenotenje prostora in homogenizacija. Na nekaterih območjih procesi revitalizacije, ponovne sakralizacije in socialne polarizacije potekajo hkrati s splošnimi trendi terciarizacije, gentrifikacije in močne rasti prebivalcev Kijeva. Vsako leto se število prebivalstva v Kijevu poveča za 20.000, kar se kaže na nepremičninskem trgu in dodatno obremenjuje mestno infrastrukturo (Dronova in Maruniak, 2018).

V boju za mestne vire nove funkcije izpodrivajo tiste, ki veljajo za poslovno manj pomembne ali manj konkurenčne. Izguba odprtih javnih prostorov je značilna za večino mestnih vozlišč. Javni mestni prostori se namenjajo gradnji poslovnih ali nakupovalnih središč. Ena izmed posledic tovrstne komercializacije je ta, da ljudje zapuščajo tradicionalne ulične javne prostore, namenjene počitku in prostočasnim dejavnostim, in se selijo v stavbe. Ti prostori doživljajo podobno usodo tudi drugje po svetu, pri čemer mestna krajina postaja homogena in neprijazna.

Na nekaterih vozliščih poteka gentrifikacija – na primer luksuzno nakupovalno središče Arena City na Besarabskem trgu (*Bessarabs'ka ploshcha*), luksuzni stanovanjski kompleks Diamond Hill (*Daymond Khyll*) na Trgu slave (*Ploshcha Slavy*), elitna stanovanjska soseska Obolonski Lipki (*Obolons'ki Lypky*) in prenovljena osrednja veleblagovnica v Kijevu na glavni ulici Hreščatik (*Vulytsya Khreshchatyk*) – po drugi strani pa ob štirih postajah podzemne železnice še vedno stojijo tržnice s trgovinami z rabljenim blagom, kar povzroča socialno polarizacijo in razdrobljenost.

Glavni povzročitelji sprememb v mestni podobi so gradbeni investitorji, ki imajo veliko kapitala in zveze z organi odločanja ter jih zanima samo hitro ustvarjen dobiček. V tem se kaže negativna stran neoliberalne urbane politike, ki spodbuja reprodukcijo monotonih vrst prostorskega razvoja in odstranjuje obstoječe značilnosti nacionalne in kulturne identitete. Posledično na območjih vozlišč v središču Kijeva, tudi na zavarovanih območjih arhitekturnih spomenikov svetovnega pomena, vizualno prevladujejo ogromne novozgrajene večnadstropne stavbe, ki kazijo prostorsko identiteto mesta in ogrožajo njegovo raznolikost (Al-Hamarneh idr., 2013). Takšna mestna gradnja se običajno izvaja brez vključenosti javnosti v procese odločanja. V zadnjih letih so se v Kijevu pojavili in postali običajni številni problemi, kot so neupoštevanje prostorske zgradbe in arhitekturne kompozicije nekaterih območij, uničenje zelenih površin, težave z osončenostjo sosednjih hiš zaradi izgradnje novih objektov in nedovoljena gradnja dodatnih nadstropij v stanovanjskih stavbah. Lokalni prebivalci se nad temi in drugimi težavami pogosto pritožujejo.

V prostorskem kontekstu so posamezna vozlišča hibridni prostori (Golubchikov idr., 2013), na katerih se modernistična arhitektura sovjetskega Kijeva eklektično povezuje s posovjetskimi visokotehnološkimi nebotičniki. Primer je Trg slave s starim hotelom Salut (*Hotel' Salyut*) in novozgrajenim luksuznim stanovanjskim kompleksom Diamond Hill. Posamezna območja tvorijo kombinacijo arhitekturnih del sovjetskega obdobja in kijevske Rusije, med katere se zdaj vrivajo steklene stavbe obdobja globalizacije (npr. na Trgu svete Sofije in Trgu svetega Mihaela).

Preglednica 1: Glavna vozlišča v Kijevu – merila in vrednost

Vozlišče:	Merila:						
	Prometna dostopnost	Prizorišče političnih dogodkov	Prizorišče zabavnih in družabnih dogodkov ter športnih tekmovanj	Prisotnost kulturnih, zgodovinskih, verskih in estetskih spomenikov, artefaktov	Prisotnost območij za pešce s kavarnami, umetniškimi trgovinami, prostori za druženje, rekreacijo in sprostitev	Prisotnost parkov, trgov in prvin edinstvene naravne krajine	Indeks vrednosti
Območja v središču Kijeva							
1. Andrejeva ulica (*Andriyivs'kyy uzviz*)	1*	0	1	2	3	1	1,3
2. Arzenalni trg (*Arsenal'na ploshcha*) in Marijin park (*Mariyins'kyy park*)	2	3	1	2	0	2	1,7
3. Ulica Hreščatik (*Vulytsya Khreshchatyk*)	2	1	2	2	2	0	1,5
4. Evropski trg (*Yevropeys'ka ploshcha*)	1	1	1	1	0	2	1
5. Trg blizu kina Oktober (*Zhovten*)	1	0	1	1	1	1	0,8
6. Trg Lesje Ukrajinke (*Ploshcha Lesi Ukrayinky*)	2	0	0	0	0	0	0,3
7. Trg Leva Tolstoja (*Ploshcha L'va Tolstoho*)	2	0	1	1	0	0	0,7
8. Trg slave (*Ploshcha Slavy*)	3	1	1	1	0	2	1,3
9. Trg Ivana Franka (*Ploshcha Ivana Franka*)	1	0	1	1	1	1	0,8
10. Gledališki trg (*Teatral'na ploshcha*)	2	0	1	1	1	1	1
11. Območje okoli Zlatih vrat (*Zoloti vorota*)	2	0	1	2	1	1	1,2
12. Trg Svete trojice (*Troyits'ka ploshcha*)	3	0	3	1	0	0	1,2
Javni prostori posebnega družbenega pomena							
13. Pogodbeni trg (*Kontraktova ploshcha*)	3	1	4	3	2	2	2,5
14. Trg neodvisnosti (*Maydan Nezalezhnosti*)	3	4	2	2	3	0	2,3
15. Trg svetega Mihaela (*Mykhaylivs'ka ploshcha*)	1	1	3	3	2	3	2,2
16. Park Tarasa Ševčenka (*Park imeni Tarasa Shevchenka*)	3	2	3	2	1	1	2
17. Trg svete Sofije (*Sofiys'ka ploshcha*)	1	2	3	4	1	0	1,8
Močno preobražena območja zaradi nakupovalnih središč							
18. Besarabski trg (*Bessarabs'ka ploshcha*)	1	0	1	1	0	0	0,5
19. Libidski trg (*Lybids'ka ploshcha*)	3	0	1	0	0	0	0,7
20. Minški trg (*Mins'ka ploshcha*)	3	0	0	0	0	0	0,5
21. Športni trg (*Sportyvna ploshcha*)	2	0	1	0	0	0	0,5

Vozlišče:	Merila:						
	Prometna dostopnost	Prizorišče političnih dogodkov	Prizorišče zabavnih in družabnih dogodkov ter športnih tekmovanj	Prisotnost kulturnih, zgodovinskih, verskih in estetskih spomenikov, artefaktov	Prisotnost območij za pešce s kavarnami, umetniškimi trgovinami, prostori za druženje, rekreacijo in sprostitev	Prisotnost parkov, trgov in prvin edinstvene naravne krajine	Indeks vrednosti
Obnovljena območja s prevladujočo prometno funkcijo							
22. Demijivski trg (*Demiyivs'ka ploshcha*)	4	0	0	0	0	0	0,7
23. Sevastopolski trg (*Sevastopol's'ka ploshcha*)	2	0	0	0	0	0	0,3
24. Poštni trg (*Poshtova ploshcha*)	3	0	2	3	2	4	2,3
Območja s prometno funkcijo, ki so potrebna obnove							
25. Darnitski trg (*Darnyts'ka ploshcha*)	3	0	0	0	0	0	0,5
26. Lukjanivski trg (*Luk'yanivs'ka ploshcha*)	3	0	0	1	0	0	0,7
27. Območje okoli postaje podzemne železnice Levobrežna (*Livoberezhna*)	3	0	0	0	0	0	0,5
28. Območje okoli postaje podzemne železnice Šuliavska (*Shulyavs'ka*)	2	0	0	0	0	0	0,3
Območja s prometno funkcijo, ki zagotavljajo medmestne, nacionalne in mednarodne prometne povezave							
29. Trg glavne železniške postaje (*Vokzal'na ploshcha*)	3	0	0	1	0	0	0,7
30. Trg Tarasa Ševčenka (*Ploshcha Tarasa Shevchenka*)	2	0	0	0	0	0	0,3
31. Trg brestovskih herojev (*Ploshcha Heroyiv Bresta*)	3	0	0	0	0	0	0,5
32. Trg železniške postaje Darnitsja (*Pryvokzal'na ploshcha*)	2	0	0	0	0	1	0,5
33. Območje okoli postaje podzemne železnice Počajna (*Pochayna*)	3	0	1	0	0	0	0,7
34. Območje okoli postaje podzemne železnice Vidubiči (*Vydubychi*)	3	0	0	0	0	0	0,5
Območja z značilnostmi vozlišč							
(a) Območja, ki so bila urejena ob novozgrajenih postajah podzemne železnice							
35. Amurski trg (*Amurs'ka ploshcha*), 36. Holosijivski trg (*Holosiyivs'ka ploshcha*), 37. Izhod s postaje podzemne železnice Akademistečko (*Akademmistechko*), 38. Izhod s postaje podzemne železnice Harkovska (*Kharkivs'ka*)							
(b) Območja v novozgrajenih stanovanjskih soseskah							
39. Trg Mikhaila Zahorodnija (*Ploshcha Mykhayla Zahorodn'oho*), 40. Trg Santiaga de Chile (*Ploshcha Sant'yaho-de-Chyli*), 41. Obolonski trg (*Obolons'ka ploshcha*)							
(c) Območja, ki imajo že od nekdaj vlogo tržnic							
42. Žitni trg (*Zhytn'otorz'ka ploshcha*), 43. Pečerski trg (*Pechers'ka ploshcha*), 44. Trg svetega Petra in Pavla (*Petropavlivs'ka ploshcha*)							

Opomba: * Merila: 0 – ni prisotno, 1 – nizko, 2 – zadovoljivo, 3 – visoko, 4 – zelo visoko

Prednost globalizacijskih procesov je v tem, da se prebivalci Kijeva na podlagi številnih primerov drugje po svetu začenjajo zavedati pomena sodelovanja v procesih odločanja, povezanih s prostorskim, gospodarskim in družbenim razvojem mesta. Čedalje večje število, obseg in raznolikost tovrstnih družbenih gibanj v Kijevu so posledica večjega zavedanja javnosti oziroma prebivalcev o njihovi odgovornosti za prihodnost mesta (Dronova in Maruniak, 2018).

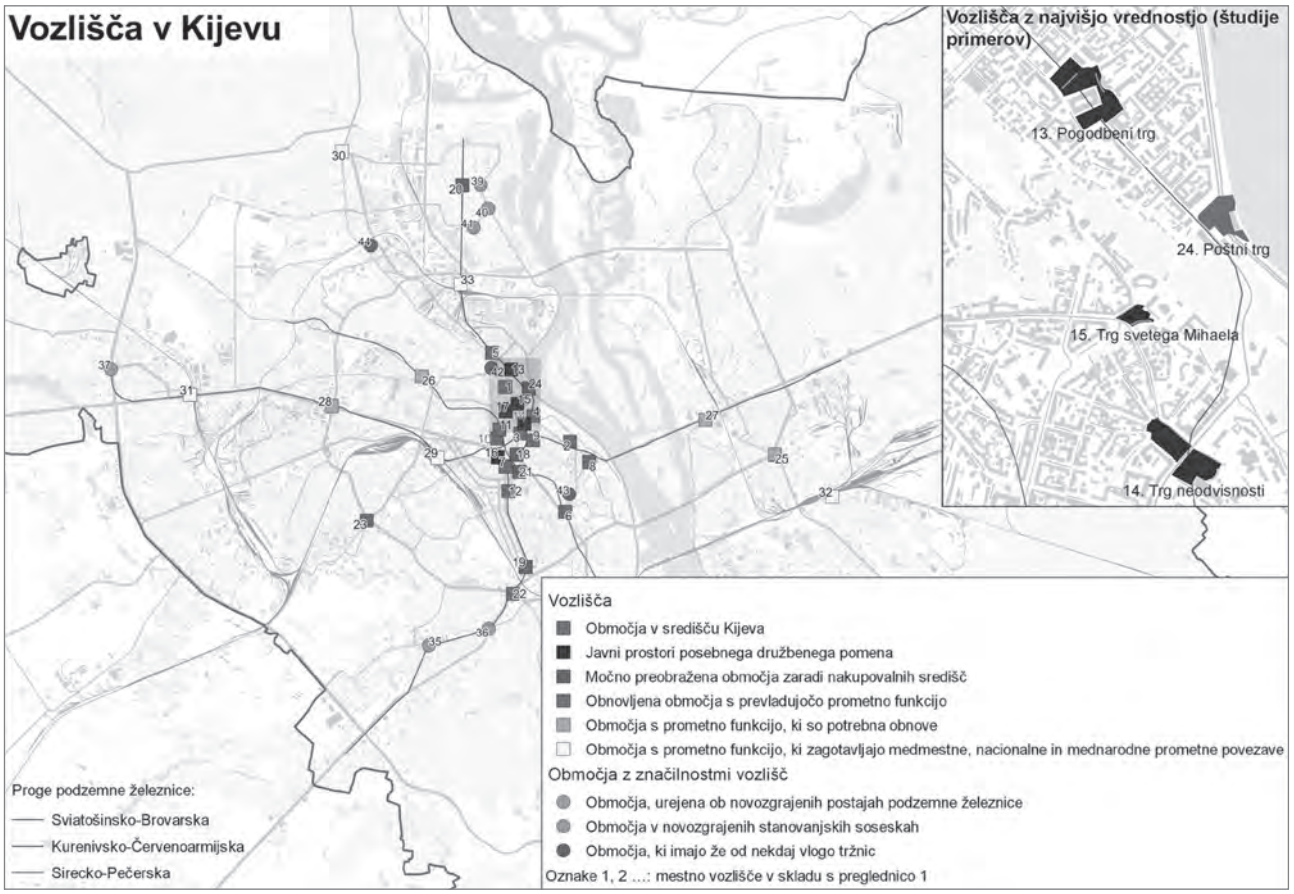
Avtorja sta v raziskavi ugotovila, da na večino vozlišč v Kijevu vplivajo svetovni neoliberalni procesi in da so med vidnimi vplivi preobrazb nekatere razlike. Ob upoštevanju teh razlik pri oblikovanju meril za določanje vozlišč ter njihove družbene in kulturne vrednosti lahko v Kijevu razlikujemo med naslednjimi vrstami vozlišč (preglednica 1, slika 2):

- območja v središču Kijeva;
- javni prostori posebnega družbenega pomena;
- območja, ki so močno preobražena zaradi nakupovalnih središč;
- obnovljena območja s prevladujočo prometno funkcijo;
- območja s prometno funkcijo, ki so potrebna obnove;
- območja s prometno funkcijo, ki zagotavljajo medmestne, nacionalne in mednarodne prometne povezave.

Na podlagi opazovanj, podatkov o križiščih različnih vrst prometa, informacij o pogostosti različnih družbenih in političnih dogodkov različnega obsega, načrtovalskih dokumentov za območja za pešce in odprte javne prostore ter upoštevanja prisotnosti edinstvene arhitekturne in naravne krajine sta avtorja oblikovala indeks vrednosti za 34 obstoječih vozlišč, proučila pa sta tudi deset območij potencialnih vozlišč (preglednica 1). Na podlagi predstavljenega modela sta določila funkcionalne in prostorske vzorce vozlišč (slika 2) ter območja z največjim družbenim pomenom: Pogodbeni trg, Poštni trg in Trg neodvisnosti. Za ponazoritev delovanja zgoraj opisanih neoliberalnih procesov so ta tri območja v nadaljevanju podrobneje pojasnjena z vidika njihovega trenutnega stanja in preobrazb.

5 Vozlišča v Kijevu: tri študije primera

Območja v središču Kijeva, kot so staro mestno jedro (*Staryy Kyiv*), Podil in Pečersk (*Pechers'k*), imajo izjemen razvojni potencial, saj je tam mnogo lepih stavb ter kulturnih in zgodovinskih spomenikov, v njihovi neposredni bližini pa je tudi veliko zelenih površin. Danes so ta območja močno prizadeta zaradi izgube svoje primarne funkcije. Na njih prevladujejo



Slika 2: Vozlišča v Kijevu (ilustracija: Olena Dronova)

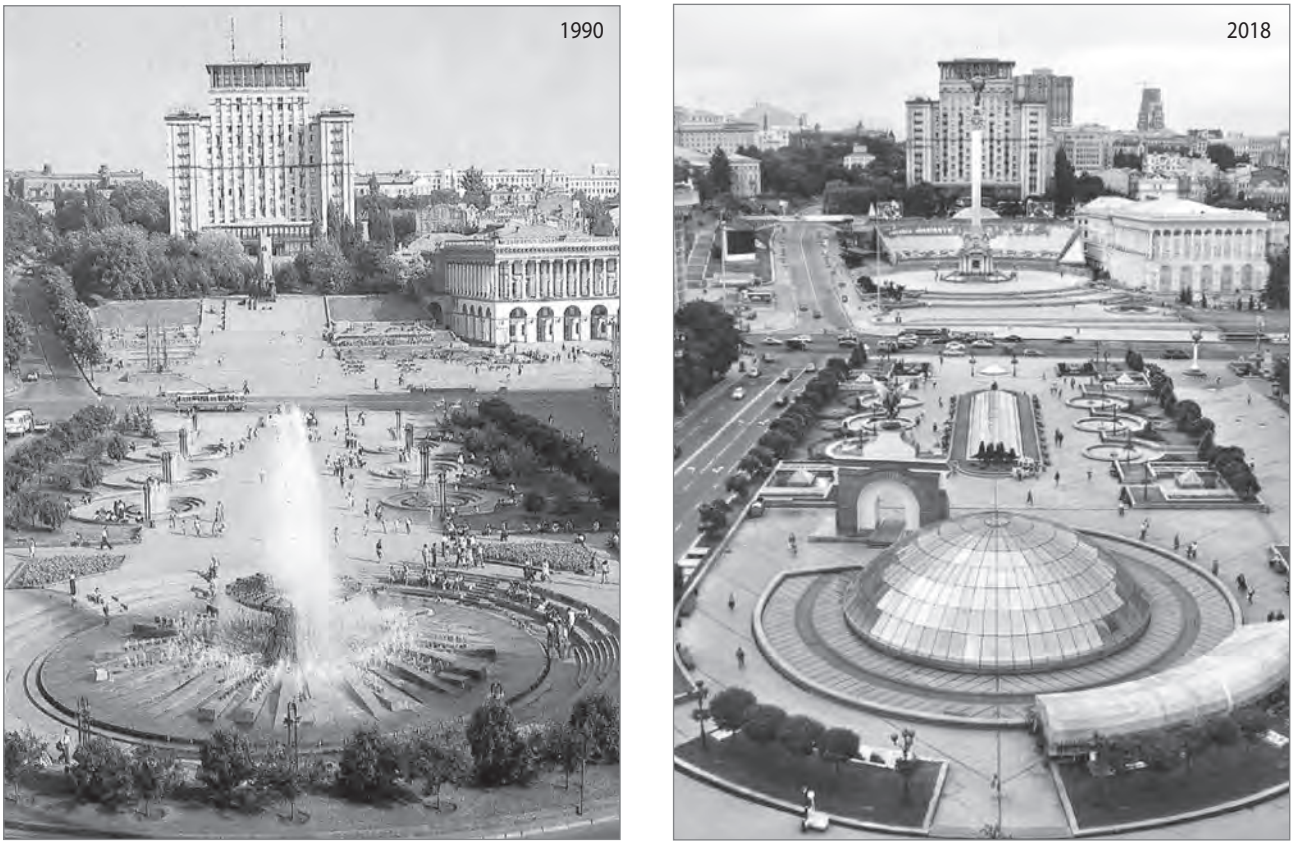
nakupovalna in zabaviščna središča, hoteli, parkirišča, začasni objekti, oglasni panoji in prodajalci, ki ponujajo blago na črno. Bolj ko se ta vozlišča razvijajo in bolj ko so pozidana, več zelenih površin izginja. Na začetku 21. stoletja je bil Kijev na vrhu seznama najbolj zelenih evropskih mest, danes pa na njem zaseda 30. mesto, z vsega 32,33 od 100 možnih točk (European Green City Index, 2015).

Pogodbeni trg *(Kontraktova ploshcha)* je eno najstarejših vozlišč v mestu, kjer je nekoč stala slavna tržnica, danes pa velja za javni prostor, ki se le počasi revitalizira in na katerem se pojavljajo številni konflikti. Kljub vsemu ostaja edini prostor v mestu, ki (vsaj delno) ohranja identiteto svobodnega, intelektualnega javnega prostora. Zgodovinska stavba Akademije Kijev-Mohyla, ki stoji na trgu, povečuje njegovo vrednost kot mestnega vozlišča, vendar se trg pogosto dojema kot navaden predmet naložb v nepremičninsko gradnjo v Kijevu ali kot kraj, katerega prostorska identiteta se lahko izkorišča, kot priročna lokacija ali kot simbolni kapital zgodovinskega pomena. V okoliških četrtih se postopno gradijo velike pisarniške stavbe in dragi hoteli, ki zgodovinsko ne spadajo v ta del mesta. Drugje se javni prostor aktivno privatizira in spreminja v letne terase dragih restavracij ali parkirišča pisarniških uslužbencev. Trenutno se zaradi številnih javnih kampanj območje počasi spreminja v udobno območje za pešce z umetniškimi trgovinami, tržnicami z izključno lokalno izdelanimi dobrinami, ki so odprte ob koncih tedna, kavarnami ter prostori za druženje, rekreacijo in sprostitev.

Tudi na Poštnem trgu *(Poshtova ploshcha)* se dogaja obsežna preobrazba. Kot pomembno prometno središče z izjemno zgodovinsko dediščino velja za najzanimivejše in najbolj znano območje v Kijevu. Najnovejša obnovitvena dela so se začela poleti 2015, njihov cilj pa je zagotoviti dostop do bregov Dnepra tako, da bi se ljudje izognili avtocesti. Čedalje več evropskih mest poskuša zagotoviti dostop do svojih rek in projekt v Kijevu ima v tem pogledu mnogo prednosti, še vedno pa ostaja veliko odprtih vprašanj pri načrtovanju in izvedbi. Območje še vedno ni dostopno invalidom, zgrajene klančine pa ne izpolnjujejo sodobnih standardov. Težave so tudi z ozelenjevanjem in sajenjem drevnine. Zaradi načrtovane gradnje restavracije in nakupovalnega središča ob rečni postaji in postaji podzemne železnice (vidna prevlada finančnih interesov) bo na območju močno primanjkovalo parkirnih mest. Pomemben družbeni in kulturni pomen imajo tudi arheološke ostaline starodavnega mesta iz obdobja kijevske Rusije (11. in 12. stoletja), ki so jih odkrili pri gradnji nakupovalnega središča. Trenutno se predstavniki javnosti, občina in gradbeni investitor še vedno dogovarjajo o možnosti, da bi tam namesto nakupovalnega središča postavili muzej. Javni aktivisti so fizično preprečili dostop do gradbišča in zahtevali ohranitev artefaktov (slika 3).

Pomembno vozlišče v Kijevu je tudi Trg neodvisnosti (*Maidan nezalezhnosti*), ki je bil v 20. stoletju večkrat prenovljen. Potem ko je Ukrajina postala neodvisna, je mestna uprava v želji, da Kijev spremeni v evropsko mesto, začela prenavljati ulico Hreščatik in njeno okolico, vključno s Trgom neodvisnosti.

Slika 3: Poštni trg v Kijevu. Napis na ograji: »Muzej bo!« (foto: Olena Dronova)



Slika 4: Trg neodvisnosti pred prenovo leta 2001 in po njej (vir: internet 1)

Ob prenovi trga leta 2001 je bil tam poleg drugih spomenikov postavljen tudi spomenik neodvisnosti. Istega leta so kljub kršitvam gradbenih in sanitarnih predpisov na tem območju odprli podzemno nakupovalno središče Globus. Po mnenju mnogih strokovnjakov bi bilo bolj smiselno ohraniti zelene površine in arheološke najdbe, odkrite med prenovo, in predel spremeniti v muzej kijevske zgodovine, kot je bilo nekoč že načrtovano (slika 4).

Kljub estetskim in funkcionalnim spremembam, ki so povezane s splošno komercializacijo prostora, Trg neodvisnosti ostaja prizorišče nacionalne politične dejavnosti. Bil je središče oranžne revolucije leta 2004 in revolucije dostojanstva leta 2014 (znane tudi pod imenom Euromaidan), na njem pa se izražajo in križajo nacionalne ideje in svoboščine. Ti dogodki na trgu so se zgodili kljub temu, da so ga nekdanje oblasti poskušale obravnavati le kot prizorišče novoletnih praznovanj (slika 5). To potrjuje, da je samorazvoj ključna lastnost tega vozlišča.

Nekateri trgi, ki so v preteklosti opravljali in še vedno opravljajo vlogo tržnic, ohranjajo značilnosti vozlišč (npr. Žitni trg, Pečerski trg in Trg svetega Petra in Pavla), drugi pa so bili v drugi polovici 20. stoletja in na začetku 21. stoletja urejeni v novozgrajenih stanovanjskih soseskah (npr. Trg Mikhaila Zahorodnija, Trg Santiaga de Čile in Obolonski trg). Tudi območja, ki so bila urejena ob novozgrajenih postajah podzemne železnice, imajo značilnosti vozlišč (npr. Amurski trg in Holosijivski trg ter območja ob izhodih s postaj Akademistečko in Harkovska). Številni trgi v Kijevu, ki so nastali ob križiščih na novo tlakovanih ulic, niso bili vključeni na seznam obstoječih vozlišč – med njimi so Ankarski trg (*Ploshcha Ankary*), Trg Pantelejmona Kuliša (*Ploshcha Panteleymona Kulisha*), Kerčenski trg (*Kerchens'ka ploshcha*), Volgograški trg (*Volhohrads'ka ploshcha*) in Trg Valerija Marčenka (*Ploshcha Valeriya Marchenka*). Danes ta območja opravljajo le vlogo cestnih križišč in niso privlačna za preživljanje prostega časa. Avtorja predvidevata, da bodo zaradi dobre prometne dostopnosti sčasoma pridobila dodatne funkcije, hkrati pa jim ob nadaljevanju trenutne smeri razvoja grozi, da se bodo spremenila v monotono krajino nakupovalnih središč, kioskov in potujočih trgovin.

6 Sklep

V številnih posovjetskih mestih Vzhodne Evrope se izvajajo pomembne preobrazbe. Mesta se izogibajo centralističnemu urbanističnemu načrtovanju in oblikovanju ter uvajajo mnogo enakih neoliberalnih urbanizacijskih mehanizmov, kot jih lahko zasledimo v ukrajinskih mestih (Sosnova, 2011). Te preobrazbe so povzročile pomembne spremembe v funkcijah in podobi mest, ki so v tem članku proučene na podlagi struk-

Slika 5: Trg neodvisnosti in protesti ob revoluciji dostojanstva (Euromaidan) leta 2014 (vir: internet 2)

turnih prvin mesta. Vozlišča se danes ne dojemajo več v smislu koncepta, ki ga je razvil Lynch, ampak kot skupek procesov, povezanih s človekovim preživetjem in spremembami krajine na vseh ravneh. Ta sprememba je povezana s temeljnimi topološkimi prvinami prostora z vidika gibanja in vidnosti. Nekatera vozlišča – zlasti stara mestna jedra, območja, ki si jih prebivalci zapomnijo po dogodkih, ki so tam potekali, in trgi, ki izstopajo zaradi verskih, arhitekturnih in izobraževalnih ustanov – imajo vlogo simbolnih mestnih središč in so del prostorske identitete mesta.

Čeprav bi morala biti prostorska identiteta eden izmed prednostnih ciljev gradbenih projektov v postkomunističnih mestih, je v primerjavi z drugimi vidiki mestnega okolja pogosto relativizirana in zapostavljena (Kuvač in Schwai, 2017). Stalna menjava funkcij in posledična reorganizacija mestne zgradbe sta najopaznejši in najpogostejši na območjih, kjer se zgoščajo funkcije in procesi. Pod vplivom neoliberalnih globalizacijskih procesov postajajo mestna vozlišča najprivlačnejša območja za različne dejavnosti, zaradi nenehnega spreminjanja akterjev in prednostnih ciljev pa se stalno in temeljito spreminjajo. Od vseh mestnih prostorov so prav vozlišča najbolj ranljiva. Z nadaljnjimi raziskavami preobrazb bi lahko proučili, kako procesi komercializacije, terciarizacije, vertikalizacije in selektivne deregulacije mestnega prostora povzročajo homogenizacijo prostora in kako vozlišča izgubljajo svojo prvotno funkcijo in identiteto.

Kot navaja Lerner (2014), je treba za to, da bi mestu povrnili dušo, ljudi spodbujati, da ustvarjajo prostore srečevanja in druženja, in poskrbeti, da to spodbuja in omogoča prav vsaka urbana funkcija. Bolj ko mesto dojemamo kot skupek procesov in funkcij, ki združujejo bogate in revne ter mlade in stare, več prostorov druženja in srečevanja bo ustvarjenih, mesto pa bo posledično postalo živahnejše (Lerner, 2014). Pri oblikovanju ozračja mesta kot celote so zelo pomembni vidiki oblika, funkcionalnost in zaščita prvotnih stavb ter bolj neoprijemljive prvine, kot sta duh in energija vozlišč. Skupaj oblikujejo podobo mesta. Na podlagi prvin in meril, navedenih v tem članku, je mogoče jasno razlikovati vozlišča od drugih mestnih struktur. Analiza trenutnih preobrazb vozlišč v Kijevu in njihovih sprememb pod vplivom neoliberalnih globalizacijskih procesov razkriva potrebo po ponovni določitvi družbenih prednostih nalog. Pozornost bi bilo treba nameniti vprašanjem, povezanim z umestitvijo, delovanjem in razvojem vozlišč, in sicer tako na teoretični in kognitivni kot upravni ravni. Na podlagi konceptov mestnega razvoja na ravni posameznih okrožij ali še nižjih ravneh, pri katerem javnost sodeluje pri oblikovanju podobe mesta, bodo vozlišča v življenju ljudi postala udoben in pomemben prostor. Ta in druga vprašanja, tudi v zvezi z uporabo celostnih pristopov k razvoju mest, bi bilo treba redno proučevati.

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Razvoj uporabniškega modula: prispevek k poplavno vzdržnemu prostorskemu načrtovanju

Članek v kontekstu trajnostnega poplavno vzdržnega prostorskega načrtovanja obravnava vlogo in pomen poznavanja vprašanj, povezanih z uporabniki prostora. Predstavlja koncept in metodološki razvoj tako imenovanega uporabniškega modula, enega od treh modulov modela celovitega sistema poplavno vzdržnega prostorskega načrtovanja. Na podlagi analiz dnevnih rutin izbranega uporabniškega profila, ki temeljijo na metodi vedenjskih zemljevidov, v kontekstu analiz modeliranja visokih voda obravnava drobne, a pomembne, podatke. S tem umešča poznavanje dinamike vsakdanjega življenja v poplavno modeliranje in poplavno vzdržno načrtovanje, ki pa običajno temelji na masovnih podatkih. Tako osnovan uporabniški modul je bil preizkušan in proučevan na testnem pilotnem območju, Planinskem polju. To je tipično kraško prelivno polje, ki je pogosto poplavljeno. Prispevek prinaša nov pristop, ki temelji na poznavanju delovanja uporabnika v prostoru in odpira nove vidike poplavno vzdržnega ali varnega prostorskega načrtovanja.

Ključne besede: integralno modeliranje, uporabniški pristop, prostorsko načrtovanje, poplava, vedenjski zemljevid

1 Uvod

Članek se nanaša na ugotovitve iz temeljnega raziskovalnega projekta Integralni sistem poplavno vzdržnega prostorskega načrtovanja, ki ga sofinancira Agencija za raziskovalno dejavnost Republike Slovenije. Namen projekta je osnovati konceptualni model poplavno vzdržnega prostorskega načrtovanja, ki hkrati obravnava vplive človekovega bivanja v prostoru in dinamiko poplav. Ta model je sestavljen iz treh medsebojno povezanih modulov: hidrogeološkega modula, urbanističnega modula in uporabniškega modula. *Hidrogeološki modul* obravnava značilnosti dnevnih vodostajev, vrednosti izpustov, podrobno prostorsko in časovno spremljanje nivoja vode, nastavitve modela za preverjanje ustreznosti parametrov, za katere se domneva, da vplivajo na poplave, in uporabo rezultatov v konkretnem primeru za poplavo določene intenzivnosti. *Uporabniški modul* obravnava posameznikovo delovanje na območju poplav z analizami dnevnih rutin in poznavanjem uporabnikovega odnosa do poplav, preizkušanjem, upoštevanjem in preverjanjem možnosti kvalitativnih podatkov, pridobljenih z metodo analize dnevnih rutin, glede na parametre, ki lahko vplivajo na poplave, in možnost uporabe teh rezultatov v konkretnem primeru za poplavo določene intenzivnosti. Dnevne rutine so bile analizirane za dve značilni obdobji: v času poplav in v času brez poplav. Odnos do poplav je bil za konkretno okolje, v katerem uporabniki živijo, obravnavan z vidika kakovosti in varnosti bivanja. *Urbanistični modul* obravnava potencial obeh predhodno vzpostavljenih modulov v povezavi z obstoječo prostorsko načrtovalsko prakso ob upoštevanju zakonskih okvirov, dejanskih procesov prostorskega načrtovanja in prostorskih načrtov.

V takem kontekstu projekt sloni na večslojni hipotezi, da je:
1. bivanje osnovna človekova dejavnost v prostoru,
2. modeliranje praktičen in uporaben pristop za napovedovanje in opozarjanje pred poplavami ter
3. ključno enakovredno in hkrati upoštevati naravne značilnosti in človekovo delovanje v prostoru.

Zamisel o celovitem pristopu kot večrazsežnostnem konceptu v raziskovanju in načrtovanju ni nova. Celovite ocene in modeli so znani kot analitični pristop v raziskavah in kot koncepti zasnove scenarijev v procesih prostorskega načrtovanja, še posebej pri spoprijemanju s posledicami in vzroki okoljskih problemov, vključno s poplavami ali problematiko visokih vod (npr. Medema idr., 2008; Ingold, 2012). Da bi se celoviti koncepti vnesli v procese načrtovanja, oblikovanje prostorskih politik in upravljanja prostora, je bilo v zadnjih desetletjih na področji prostorskega načrtovanja in upravljanja prostorskega razvoja vpeljanih več konceptov, kot na primer trajnostni razvoj (OZN, 2015), ekosistemski pristop (UNEP, 2000) in ekosistemske storitve (MEA, 2005) ter v zadnjem času koncept na naravi temelječih rešitev (UNEP, 2010; IUCN, 2012; Cohen-Shacham idr., 2016). To kaže, da obstaja precejšnje strinjanje o tem, da so potrebni celoviti pristopi. Hkrati primeri njihove uvedbe kažejo, da je manjše soglasje o tem, kaj celovitost dejansko pomeni in kako jo je mogoče učinkovito vključiti v proces modeliranja.

2 Teoretično ozadje

Po Hamiltonovi idr. (2015) celovito ocenjevanje in modeliranje pomeni vključevanje komponent v sklopu desetih medsebojno povezanih razsežnosti in med njimi. Avtorji jih razvrščajo v tri krovne skupine: 1. ključna gonila celovitega pristopa, 2. metodološki vidiki, ki zahtevajo celovit pristop, in 3. vidiki sistema, ki se celovito obravnava. Zadnjenavedeni so razplasteni v štiri medsebojno povezane sestavine: 1. človek, 2. narava, 3. prostor in 4. čas. Tvorijo neposreden vsebinski okvir tako za konceptualni model poplavno vzdržnega prostorskega načrtovanja kot za zasnovo uporabniškega modula. Prispevek se tako osredotoča na vključitev pojma dinamike vsakdanjega življenja v sistem trajnostnega načrtovanja in modeliranja visokih voda ter se nanaša na zasnovo in metodološki pristop uporabniškega modula.

Po Hamiltonovi idr. (2015) se sestavina človek nanaša na vse dejavnike, povezane s človekom, relevantne za problem, ki ga obravnava celovit pristop. Vključuje lahko dejavnike, vezane na prebivalstvo, politike, organizacije, kulturo, tehnologijo in gospodarstvo, ali obravnava človekovo vedenje in dejavnike izbire. To kaže, da se številne discipline opredeljujejo do človeka kot dejavnika obravnave na njihovem interesnem področju in da pri tem upoštevajo na primer natančnost velikostnega reda podatka in merila (Golledge in Stimson, 1997). Vendar na področju sektorja za vode, od varstva pred poplavami do vodnih virov, vključevanje vidikov, ki se nanašajo na človeka kot sestavino modeliranja ali celovitega pristopa, še posebej na mikro ravni, še ni uveljavljeno (npr. Medema idr., 2008; Hering in Ingold, 2012). V prostorskem načrtovanju je simuliranje interakcij med človekom in njegovim okoljem, ki se kažejo na mikro ravni in ki skupaj vplivajo na vzorce na makro ravni, pogosto vezano na modeliranje z agenti (npr. Jiang in Xiaobai, 2010; Müller idr., 2013). To v tehničnem in tehnološkem smislu pogosto zahteva masovne podatke ali podatkovne baze.

Človeški sistemi so relacijski in, kot poudarjajo Hamiltonova idr. (2015), odvisni od blaga in storitev, ki jih zagotavlja naravni sistem, ter hkrati s svojimi dejavnostmi in uporabo virov spreminjajo procese in sestavine naravnega sistema. Zato sta v postopku priprave modela poplavno vzdržnega prostorskega načrtovanja smotrna oblikovanje uporabniškega modula ter povezovanje s hidrogeološkim modulom (naravni sistem) in urbanističnim modulom (ki glede na Hamiltono-

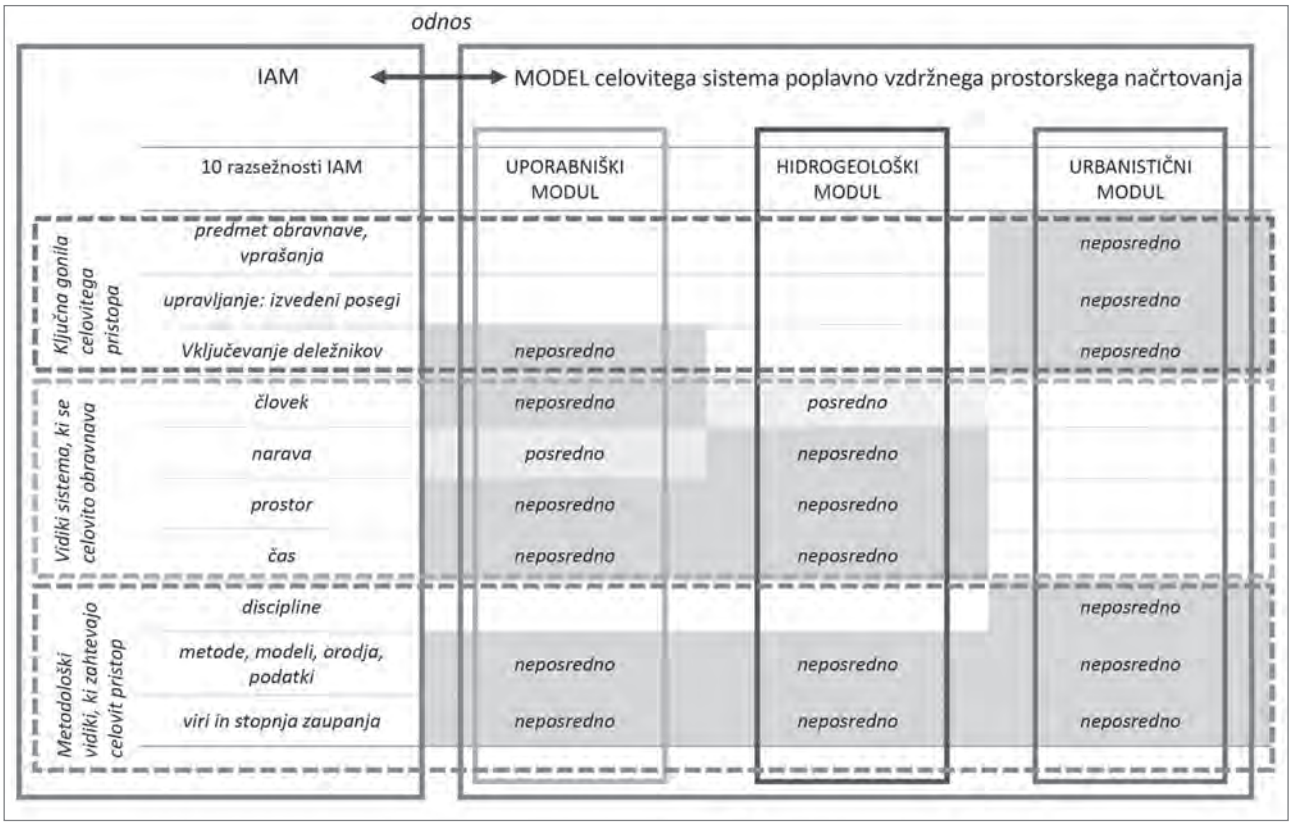
vo idr. (2015) obsega vidike prvih dveh krovnih skupin celovitega ocenjevanja in modeliranja: 1. ključna gonila celovitega pristopa in 2. metodološki vidiki, ki zahtevajo celovit pristop).

Hamiltonova idr. (2015) sestavino narava opredeljujejo kot razsežnost, ki se nanaša na vključevanje sestavin biofizikalnih sistemov, kot so npr. podnebje, zemljišče, voda, ozračje ali ekosistemi. Kot značilnost izpostavijo, da je lahko končna oblika iz enega procesa začetna faza drugega (preostanka procesa), obenem pa je ključno upoštevati, da se naravne sestavine spreminjajo glede na merilo. Nekaj, kar se kaže v drobnem merilu, ima na primer lahko vzroke in/ali vplive na pojave, ki se izrazijo v večjem merilu. Ta vidik je ključen tudi pri prostorskem načrtovanju, zlasti pri trajnostnem načrtovanju varstva pred poplavami, saj se lahko vzroki in učinki kažejo na zelo različnih lokacijah in so odvisni od časa in merila prostora. Očitno je, da narava kot sestavina izraža negotovost, kompleksnost in dinamičnost in da je zanjo značilno, da se stalno spreminja. V zvezi s prostorskim načrtovanjem Nesshöver idr. (2017) opozarjajo na prilagodljive pristope upravljanja, pri katerih se cilji in ukrepi prilagajajo takim spremembam. Vključevanje družbenoekonomskih in okoljskih vsebin v procese celovitega modeliranja še vedno ni zadostno upoštevano v modelih družboslovnih raziskav (npr. urbanistične študije). Pregled literature s področja celovitega modeliranja pa kaže, da takšni pristopi postajajo čedalje pogostejši pri pripravah ocen razpoložljivosti in upravljanju naravnih virov (npr. Laniak idr., 2013; Kragt idr., 2011) ter kmetijskih sistemov (npr. van Ittersum idr., 2008). Celoviti modeli, ki posnemajo dinamiko vode, navadno vključujejo podatke o tipu in strukturi površja ter nivojih pojavljanja vode, ne obravnavajo pa drugih, primarno neprostorskih ali neokoljskih lastnosti prostora (npr. človekove dejavnosti v prostoru, ki jih opisujejo drobni kvalitativni podatki o dinamičnih vzorcih zasedbe prostora, ki so v primerjavi z zajemom masovnih podatkov za zajem običajno časovno potratni podatki, ki se zbirajo počasi).

Vidiki sestavin človeka in sestavin narave (kot so pojasnjeni v Hamilton idr., 2015) neposredno izražajo srž t. i. družbeno-ekoloških raziskav, ki obravnavajo dinamično in medsebojno povezano sovplivanje človekovih in naravnih sistemov, s poudarkom na sorazvoju naravnih in družbenih sistemov, pri čemer razumevanje sprememb v enem sistemu zahteva razumevanje sprememb v drugem, ne pa, da se sistema obravnavata ločeno (npr. Young idr., 2006; Vespignani, 2012). Takšno razumevanje se neposredno kaže v razvoju konceptualnega modela za celovit sistem poplavno vzdržnega prostorskega načrtovanja in je pomembno izhodišče za razvoj uporabniškega modula kot ene od sestavin omenjenega modela. Da bi razumeli okoljske probleme in pomagali oblikovati učinkovite politike, je pomembno razumeti temeljne vzgibe delovanja človeka v prostoru. Nesshöver idr. (2017) poudarjajo, da je treba s prostorskonačrtovalskega vidika razviti in postopno udejanjiti nekakšno družbeno-ekološko modeliranje, pri čemer je treba poudarjati pomen spremljanja družbenih sprememb in njihovo opredeljevanje glede na značilnosti in kontekst prostora. Rebernik idr. (v tisku) so nadgradili bipolarni družbeno-ekološki koncept z zasnovo štiridimenzionalnega modela, ki obravnava družbene izzive skozi t. i. relacijsko raven, pri čemer se hkrati vzporejajo in vrednotijo odnosi med uporabnikom in okoljem/upravljanjem, uporabnikom in tehnologijo ter okoljem/upravljanjem in tehnologijo.

Z uvajanjem tovrstnih konceptov je lokalno znanje lahko vključeno v prostorsko načrtovanje in raziskave; kaj ljudje vedo, kakšne izkušnje imajo ali kako (lahko) delujejo v prostoru ali ga upravljajo, da si zagotavljajo želeno raven kakovosti bivanja. Razvoj uporabniškega modula sloni na dveh medsebojno dopolnjujočih se metodologijah za obravnavo in prepoznavanje uporabniško-prostorskih odnosov: vedenjskih zemljevidih GIS (npr. Goličnik Marušić in Marušić, 2012) in oceni kakovosti časa (ang. *Time Quality Assessment, TQA*; Marušić in Goličnik Marušić, 2017, 2016). Oba pristopa gradita na upoštevanju odnosov med uporabnikom, okoljem/upravljanjem in tehnologijo. V prostorskem smislu se prvi nanaša na drobno (mikro) merilo, v katerem analizira dinamične vzorce zasedb prostora glede na del dneva, del tedna, starostno ali uporabniško skupino, tip dejavnosti in sobivanje dejavnosti, v katere so vključeni posamezniki v prostoru glede na vrsto dejavnosti in glede na prostorske danosti, ki jih omogoča prostor, v katerem se odvijajo. Pristop ocene kakovosti časa je naprednejši. Zasnovan je kot celovit okvir za modeliranje, pri čemer z analizo dnevnih rutin uporabniškega profila in oceno vrednosti prostora z vidika kakovosti porabe časa uporabniškega profila v tem prostoru, vključno z njegovimi gospodarskimi zmožnostmi za preživljanje časa v tem izbranem prostoru, poda oceno kakovosti prostora za uporabo.

Oceno kakovosti časa s koncepti dnevnih rutin kot sestavinami uporabniškega modula je mogoče vzporediti s t. i. časovno sestavino v celovitem pristopu k modeliranju po Hamiltonovi idr. (2015). Temelji na dejstvu, da je pomembno upoštevati tudi časovne razsežnosti procesov, ki se lahko pojavijo v obdobjih, ki obsegajo od nekaj minut do nekaj ur (npr. nekatere biološke ali kemične funkcije) ali od dneva do več tednov (npr. ekološki procesi), drugi pa se lahko zgodijo v nekaj letih (npr. družbenoekonomski procesi), desetletjih ali daljših obdobjih (npr. podnebne spremembe). Časovna razsežnost je še posebej pomembna, ker naravni in človekovi sistemi delujejo v različnih časovnih okvirih. Pri zasnovi modela celovitega sistema poplavno vzdržnega prostorskega načrtovanja in njegovih modulov je bilo izziv prepoznati pojav kratkih časovnih okvirov kot virov vhodnih podatkov ali pojasnjevalnih okoliščin za procese daljših časovnih okvirov in obratno. Časov-



Slika 1: Razmerje med konceptom celovito ocenjevanje in modeliranje (ang. *Integrated Assessment and Modelling, IAM*) po Hamiltonovi idr. (2015) (levi okvir) in konceptualnim modelom celovitega sistema poplavno vzdržnega prostorskega načrtovanja in njegovimi moduli (desni okvir) (shema: Barbara Goličnik Marušić)

ne razsežnosti procesov, bodisi naravnih bodisi družbenih, se vedno zgodijo v nekem prostoru, zato so povezane z merilom prostora. V kontekstu temeljne raziskave, ki je ozadje vsebine tega prispevka, se konceptualno vse štiri sestavine, ki so po Hamiltonovi idr. (2015) poglavitne za celovit pristop k modeliranju (človek, narava, prostor, čas), kažejo v modelu in so ustrezno interpretirane tudi v vsakem od njegovih sestavnih modulov (glej sliko 1).

3 Metoda zasnove uporabniškega modula

Razvoj modula se navezuje na čedalje bolj uveljavljen koncept vključevanja uporabnikov pri reševanju vprašanj prostorskega razvoja, vendar ne izraža koncepta večnivojskega vključevanja deležnikov, ki kljub vsemu navadno sledi od zgoraj navzdol usmerjenim protokolom v procesu prostorskega načrtovanja. Upošteva pogosto prezrt kvalitativni pristop, ki temelji na procesu od spodaj navzgor in drobnih in poglobljenih podatkih, ki se zbirajo počasi in so utemeljeni z etnografskimi raziskavami. Te slonijo na metodah, ki se osredotočajo na uporabnika in uporabniško-prostorske odnose, kot so na primer že omenjeni vedenjski zemljevidi in ocena kakovosti časa. Na podlagi združitve obeh metod je bil zasnovan koncept dnevne rutine uporabniškega profila. Ta obravnava in prikazuje časovno-prostorske razsežnosti uporab prostora in je glavna dinamična družbena sestavina modela. Ker uporabniški modul poleg analiz dnevnih rutin v obdobju poplav in v obdobju brez poplav obravnava tudi druga vprašanja, od odnosa do poplav, pojmovanja varnega in kakovostnega bivanja do tipologije in operativnosti zbranih podatkov, je proces oblikovanja uporabniškega modula sledil naslednjim korakom:

- predstavitev testnega območja,
- opredelitev odnosov uporabnik – prostor – poplava,
- opredelitev raziskovalnih tehnik,
- metodologija izvajanja raziskovalnih tehnik,
- organizacija podatkov in kodiranje,
- analiza in interpretacija zbranih podatkov,
- vrednotenje modula kot orodja za analize in interpretacijo v prostorskem načrtovanju.

Koraki protokola, ki se nanašajo na oblikovanje modula, so navedeni v podpoglavjih tega poglavja, koraki, ki se nanašajo na testiranje modula, pa so navedeni v poglavju 4. Pri načrtovanju modula je bila z vidika potencialne uporabne vrednosti modula v procesu prostorskega načrtovanja postavljena naslednja delovna hipoteza: Oblikovanje in preizkušanje modula na primeru prostora, kjer so prebivalci navajeni živeti s poplavami, lahko prispevata k boljši uporabni vrednosti pristopa za po-

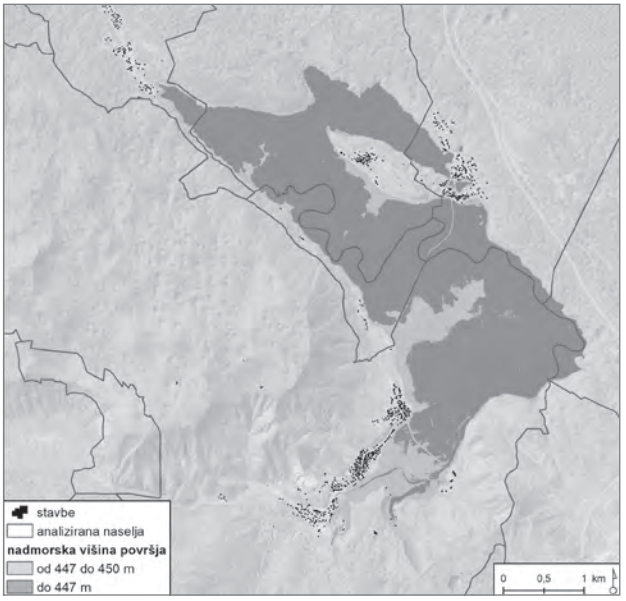
trebe poplavno vzdržnega prostorskega načrtovanja, saj redne poplave ljudi prisilijo k odzivanju na take dogodke, ker se prebivalci bolj zavedajo ogroženosti zaradi poplav in ker imajo s poplavami več izkušenj in so morda bolj(e) pripravljeni na prilagoditve zaradi poplav. Na podlagi takih stališč je mogoče zasnovati uporabniški modul tako, da prispeva k učinkovitemu iskanju rešitev in proaktivni pripravi smernic bodisi za prilagajanje na način življenja s poplavami bodisi za poplavno vzdržno upravljanje ali načrtovanje.

3.1 Predstavitev testnega območja

Že ob prijavi raziskovalnega projekta je bilo izbrano testno območje, tako da je bilo k razvoju modela in modulov mogoče pristopiti kar se da celovito. Da bi z zasnovanim modelom lahko razumeli naravne in družbene dinamične procese, je bilo treba izbrati območje, ki je občutljiv prostor za prostorski razvoj, pojavnost poplav in potencial za raznovrstne človekove interakcije s prostorom. Pilotno območje, ki je ustrezalo vsem merilom, je Planinsko polje, kraško polje v jugovzhodni Sloveniji.

Hidrogeološko je Planinsko polje pomembno sotočje kraških voda iz več prispevnih zaledij. Skupna velikost zaledja je ocenjena 746 km^2. Na jugu polja se voda pojavlja v dveh velikih izvirih, to sta Unica in Malenščica. Skozi izvir Malenščice voda priteka difuzno prek manjših kraških kanalov. Voda Unice na površje priteka skozi dobro razviti sistem jamskih kanalov. Oba vodotoka se združita v reko Unico, ki prečka Planinsko polje in ponikne na severnih in zahodnih obronkih. Voda se znova pojavi na površju na robu Ljubljanske kotline kot Ljubljanica. Planinsko polje se razprostira na območju 10 km^2 in ima dokaj ravno dno na nadmorskih višinah med 444 in 447 m. To je tipičen primer prelivnega polja, ki je pogosto poplavljeno. V povprečju je Planinsko polje poplavljeno 41 dni na leto. Višina poplav lahko dosega osem metrov, to je na nadmorskih višinah med 442 in 450,2 m. Količina vode ob obsežnejših poplavah lahko doseže približno 26 milijonov m^3 z jezersko površino 10 km^2. (Kovačič in Viršek Ravbar, 2010; Viršek Ravbar idr., 2012).

Hidrogeomorfološke značilnosti Planinskega polja značilno prispevajo k spremenljivosti krajinske slike čez vse leto. Zaradi naravnih značilnosti in krajinske pestrosti, ki se kaže z značilnimi krajinskimi vzorci meandrirajoče reke Unice, obvodne zarasti in drugih manjših zaplat vegetacije, posamičnih osamelih dreves in travnikov, je Planinsko polje prepoznavna krajinska celota (Marušič in Jančič, 1998). Obdelovalna polja in naselja so na rahlo dvignjenih obronkih dna polja. Planinsko polje je krajinski park s prepoznavno naravno in kulturno krajino, kar se kaže tudi v tem, da je območje zavarovano z različnimi oblikami varovanja narave (Naravovarstveni atlas, 2018).

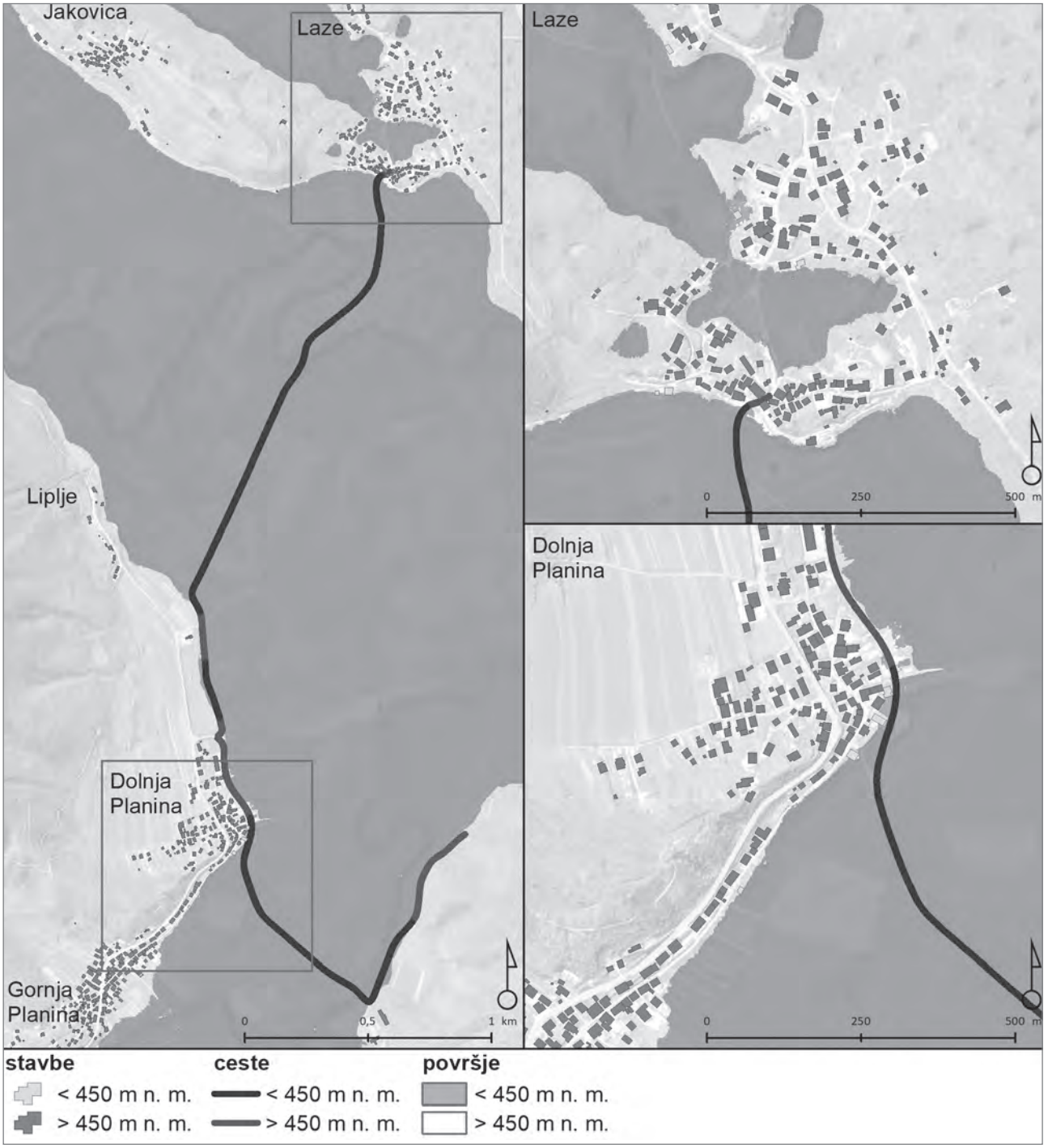


Slika 2: Poplavljenost Planinskega polja (avtor: Simon Koblar; vir: Agencija Republike Slovenije za okolje, 2015, in Statistični urad Republike Slovenije, 2018a)

Največje in najstarejše naselje na tem območju je Planina. Leži na dvignjenem robu nad poljem in ob vznožju Planinske gore. Podolžno zasnovano naselje se razteza vzdolž prometne poti in ima dve zgostitveni jedri. Večina prebivalstva območja Planinskega polja, približno 55 %, živi na Planini. V Lazah, naselju, ki je na nasprotni strani polja, biva 23 % prebivalstva, 16 % prebivalstva živi v naselju Grčarevec, v nekoliko odmaknjenem in s poljem manj povezanem severozahodnem delu. Indeks prebivalstva za naselja Planinskega polja je za obdobje 2008–2017 je znašal +104,8.

Kadar je Planinsko polje poplavljeno na nadmorski višini 447 m, je pod vodo v dolžini 130 m tudi najnižji odsek ceste Planina-Laze. Čeprav hiše in druga poslopja v takih razmerah še niso prizadeti, dinamika vode na polju že vpliva na vsakdanje življenje prebivalcev. Ko poplava na Planinskem polju doseže nadmorsko višino 449 m, sta poplavljeni celotna cesta Planina–Laze in cesta Planina–Haasberg. Dostop do naselij je možen po obvoznih cestah. Stavbe so prizadete, ko voda doseže nadmorsko višino 450 m. V takih razmerah so poplavljene le nekatere nižje ležeče hiše, ki so na območju že več kot 100 let (slika 3). Ko pa nivo vode doseže 453 m nadmorske višine, sta poplavljeni cestna povezava Haasberg–Planina (Dolnja Planina)–Laze in obcestna pozidava (slika 4).

Statistični urad Republike Slovenije je s portalom STAGE (Statistični urad ..., 2018b) državne statistične podatke prilagodil in prikazal na prostorske enote 100 x 100 metrov in s tem prispeval k interpretaciji masovnih podatkov z vidika drobnih podatkov. Tako obravnavani podatki so bili uporabljeni za nadaljnjo predstavitev pilotnega območja in kot okvir za

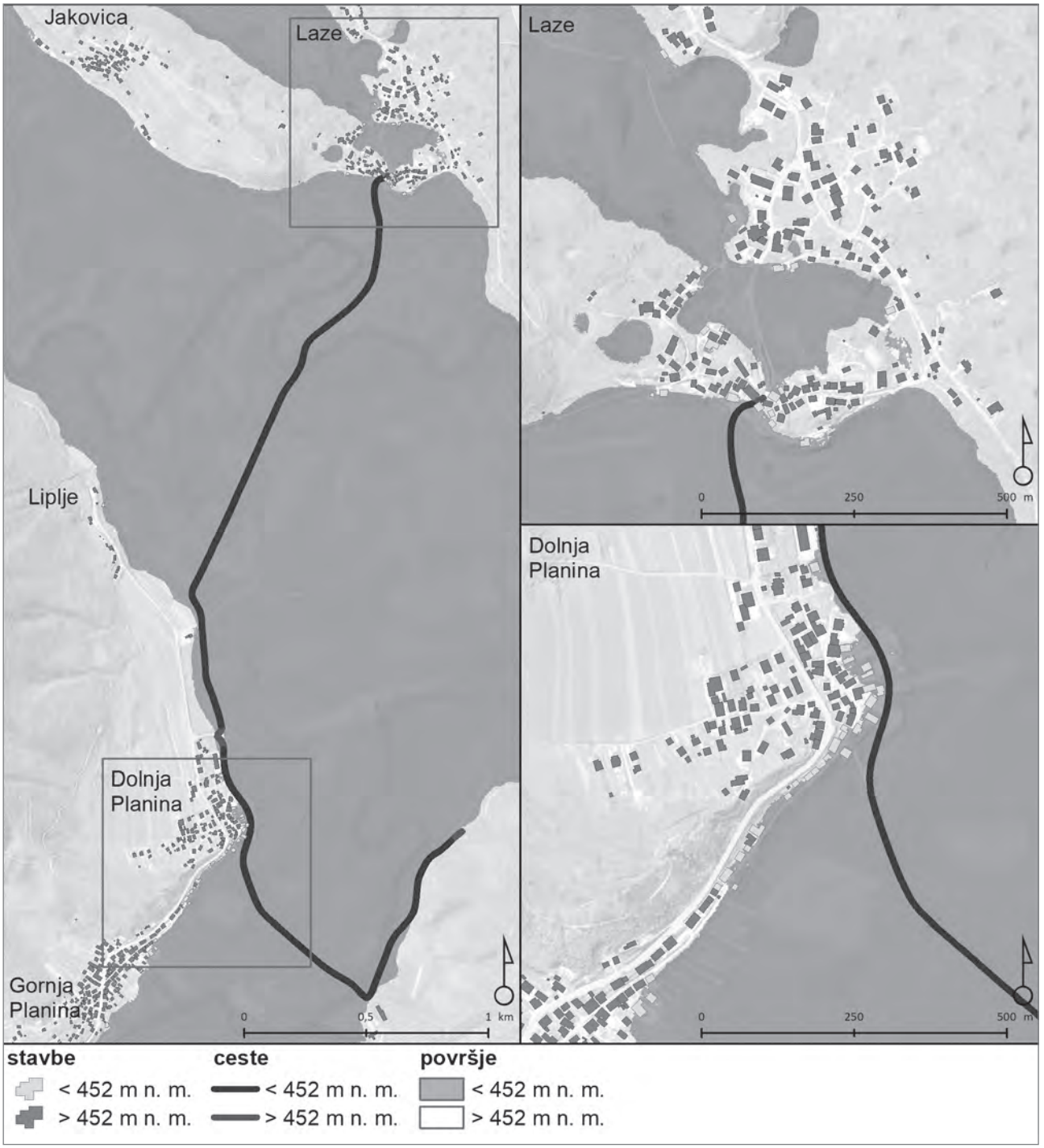


Slika 3: Poplavljenost polja do nadmorske višine 450 m (avtor: Simon Koblar; vir: Agencija Republike Slovenije za okolje, 2015, in Geodetska uprava Republike Slovenije, 2017, 2018)

zajem podatkov v uporabniškem modulu, ki temelji na načelu od spodaj navzgor in stremi k zajemu drobnih kvalitativnih podatkov. Podatki portala STAGE so pokazali, da je naselje Liplje najmanj intenzivno poseljeno in da imajo naselja Laze, Jakovica in Grčarevec najbolj podobno strukturo glede na število prebivalstva, prikazanega v mreži 100 x 100 metrov. Planina je najgosteje naseljena, najgosteje na nekaj lokacijah, kjer na enoto 100 x 100 metrov živi 30-42 ljudi (slika 5).

3.2 Opredelitev odnosov uporabnik – prostor – poplava

Z vsebinskega vidika je bilo največji izziv pri oblikovanju uporabniškega modula razumevanje razmerij uporabnik – prostor – poplava. Z vpeljavo kvalitativnega pristopa k obravnavi vprašanj poplavno vzdržnega prostorskega načrtovanja so že začetni koraki snovanja modula pokazali na nekaj ključnih tem. Te so živeti s poplavo, grožnja in strah, prevzetost nad

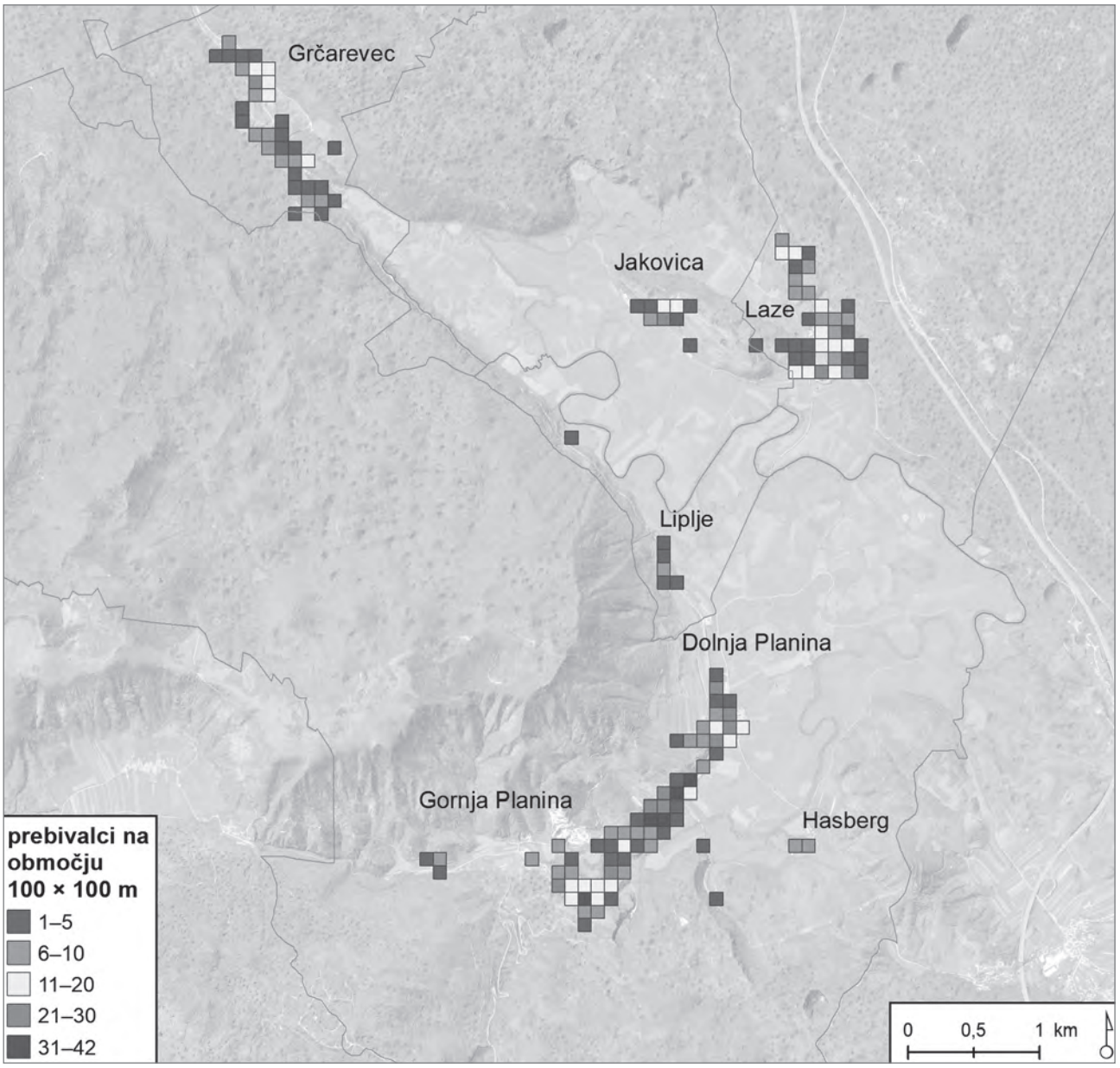


Slika 4: Poplavljenost polja do nadmorske višine 453 m (avtor: Simon Koblar; vir: Agencija Republike Slovenije za okolje, 2015, in Geodetska uprava Republike Slovenije, 2017, 2018)

krajinsko sliko in naravo kot procesom, biti in postati del takega procesa, izpostavljenost vplivom poplav, z lastnim obnašanjem (uporabo prostora) vplivati na poplavo in morebiten človekov prispevek k negativnim posledicam na kakovost bivanja itd. V procesu razvoja uporabniškega modula so se po nekaj zaporednih sestankih in delavnicah projektne skupine izoblikovali podrobni vsebinski sklopi in opredelitve ključnih ciljnih skupin vprašanj. Te so bile običajna dnevna rutina bivanja na Planinskem polju, kadar ni poplav, običajna dnevna rutina bivanja na Planinskem polju v primeru poplav, ogroženost in odnos do poplav ter človekov vpliv na poplave. V tej fazi je bil sprejet sklep, da je smiselno pripraviti vprašalnik za individualne intervjuje s prebivalci Planinskega polja.

3.3 Opredelitev raziskovalnih tehnik

Ko je bil vsebinski koncept modula postavljen, je bilo treba določiti in opredeliti še tehnike in orodja za zajem podatkov



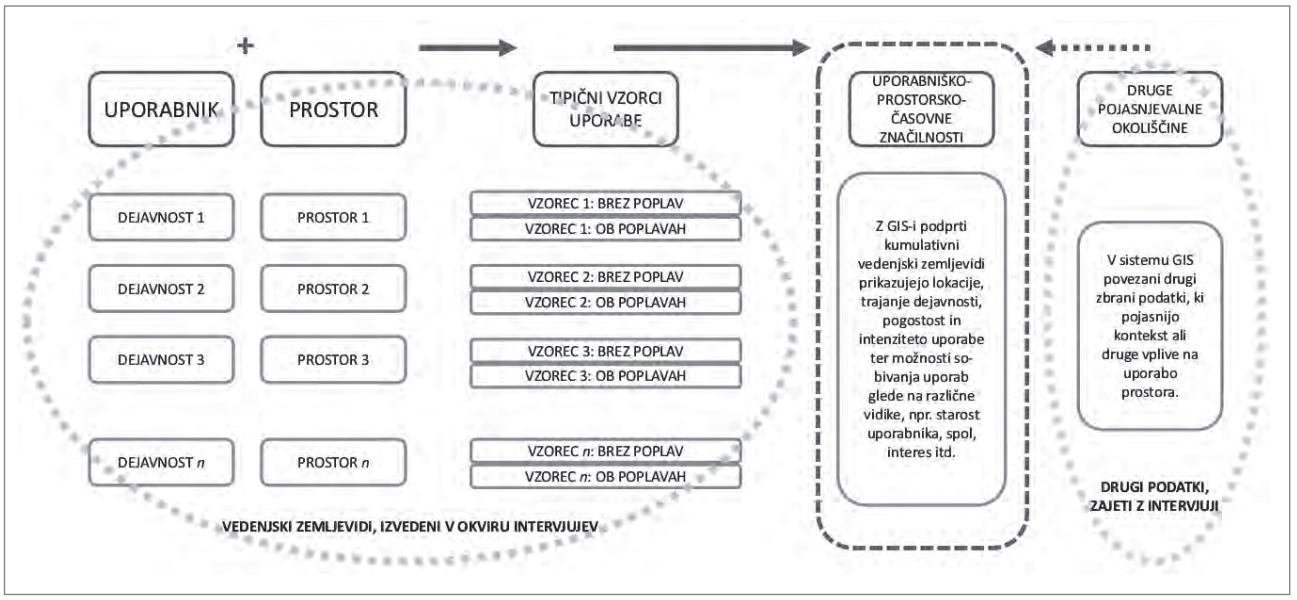
Slika 5: Število prebivalcev po naseljih glede na mrežo 100 x 100 metrov (avtor: Simon Koblar; vir: Statistični urad Republike Slovenije, 2018b, in Geodetska uprava Republike Slovenije, 2017, 2018)

ter ciljno uporabniško skupino ali uporabniški profil. Na podlagi zgoraj omenjenih ciljnih skupin vprašanj je bil pripravljen petdelni vprašalnik za izvajanje intervjujev, ki je zajemal:

1. splošne podatke o vprašanem,
2. običajno dnevno rutino bivanja na Planinskem polju, kadar ni poplav,
3. ogroženost zaradi poplav in odnos do njih,
4. običajno dnevno rutino bivanja na Planinskem polju v času poplav,
5. človekove vplive na poplave.

Vsak od petih delov vprašalnika ima svojo zgradbo. Za prvi, tretji in peti del so značilna strukturirana in delno strukturirana vprašanja ter nekaj vprašanj odprtega tipa. Drugi in četrti del se nanašata na posameznikove dnevne rutine. Vprašani so izpolnjevali vnaprej pripravljene preglednice za opis dejavnosti dnevne rutine in območja izvajanja dejavnosti zarisovali na vnaprej pripravljenih kartah.

Prvi del vprašalnika, Splošne informacije, je bil razdeljen na enajst sklopov, ki se nanašajo na opisne podatke vprašanega, kot so leto rojstva, stanje dejavnosti, stopnja izobrazbe, kraj bivanja, kraj dela, število članov gospodinjstva in število generacij v gospodinjstvu, podatek o tem, ali je vprašani domačin ali priseljenec, stopnja življenjske ravni z vidika zmožnosti pokrivanja osnovnih življenjskih stroškov in stopnja življenjske ravni z vidika zmožnosti pokrivanja stroškov za dodatne dejavnosti. Vse kategorije so bile razčlenjene tako, da ustrezajo klasifikaciji Statističnega urada Republike Slovenije. Tretji del vprašalnika, Ogroženost zaradi poplav in odnos do njih, najprej s štirimi



Slika 6: Sestavine uporabniškega modula, njihove značilnosti in povezave za celovito interpretacijo dnevne rutine uporabniškega profila (shema: Barbara Goličnik Marušić)

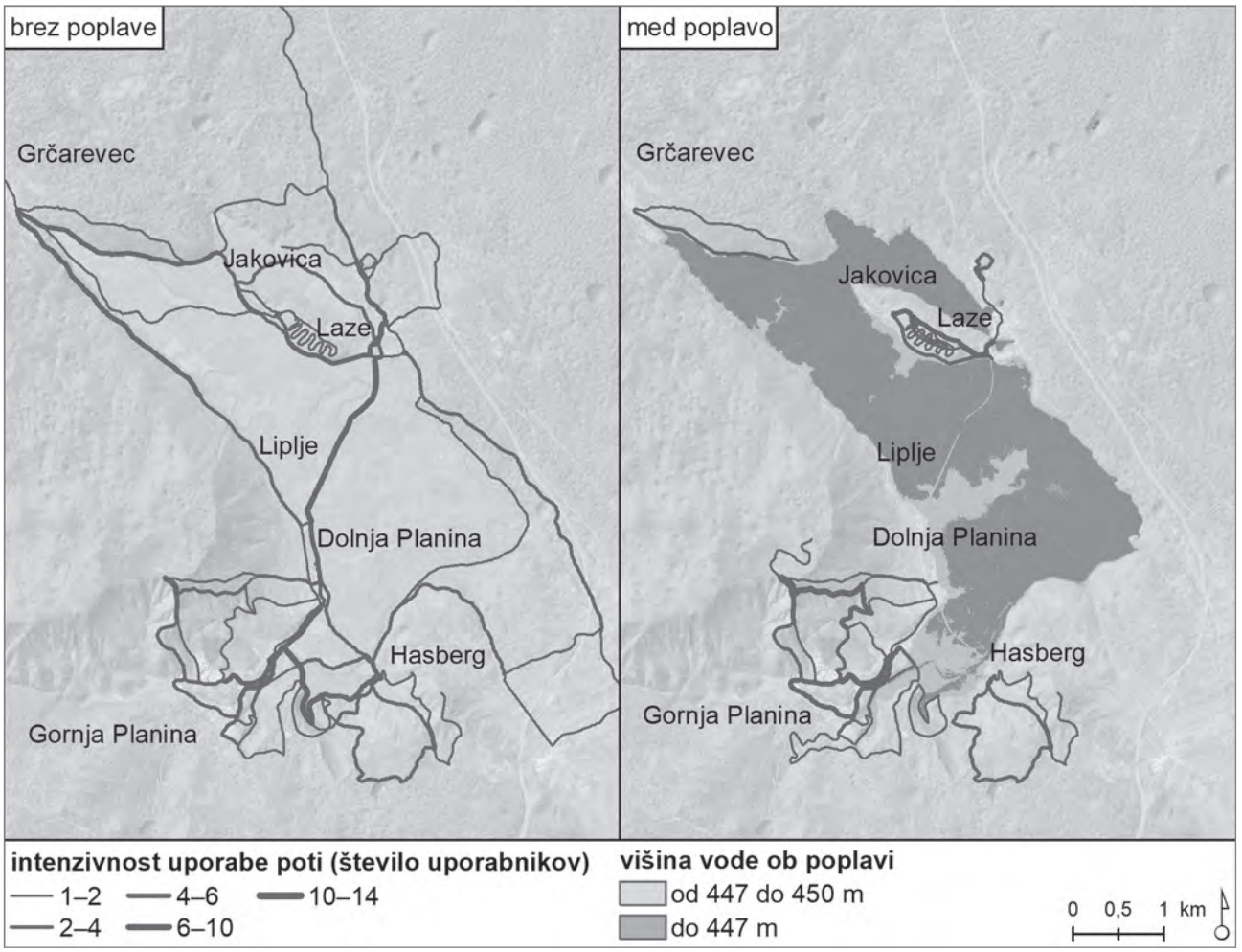
odprtimi vprašanji obravnava ogroženost zaradi poplav, nato ogroženost glede na velikost poplave, potem se osredotoča na tipe ogroženosti bivanja na Planinskem polju zaradi poplav ter na dojemanje poplav z vidika vzrokov in z vidika vpliva na bivanje in delo v primeru običajnih in izjemnih poplav. Vprašanja se nanašajo tudi na osebne izkušnje z izjemnimi poplavami in morebitno gospodarsko škodo zaradi poplav. Nazadnje so bili sodelujoči vprašani, ali bi se, če bi se jim ponudila priložnost, preselili z območja Planinskega polja. Tako kot tretji tudi peti del vprašalnika sprašuje po vzročnih povezavah, s poudarkom na vplivih, ki jih ima človek lahko s svojim delovanjem v prostoru na poplave ali na (dodatne) učinke poplav.

Drugi in četrti del vprašalnika, ki se nanašata na dnevne rutine prebivalcev naselij na Planinskem polju, kadar ni poplav (drugi del) in v poplavnih razmerah (četrti del), obsegata dva sklopa vprašanj. Prvi sprašuje po tipičnih dnevnih rutinah med tednom, drugi ob koncu tedna. V delu, ki se nanaša na razmere brez poplav (drugi del), je bilo izhodišče za zapis dnevnih rutin, da si vprašani zamislijo prijeten dan v letnem času, ko je vreme lepo za preživljanje časa zunaj. Poleg tega, da so se v tabelo vnesli podatke o dejavnostih dnevne rutine, trajanju (od – do) in lokacijah posamezne dejavnosti, so bile dejavnosti dnevne rutine zarisane tudi na priloženo karto. Za lažje delo so imeli vprašani na ogled tudi vnaprej pripravljene primere izpolnjenih tabel in primere vedenjskih zemljevidov dnevnih rutin. Pri vseh vprašanjih je zapis odgovorov, parametrov dnevnih rutin in vedenjskih zemljevidov opravil izpraševalec, in ne vprašani. Hkrati z razvojem vprašalnika so bile proučene tudi možnosti o načinu izvajanja vprašalnika. Te so bile neposredni intervjuji s posameznikom, spletni vprašalnik, kombinacija neposrednih intervjujev in zajema podatkov s spletnim vprašalnikom.

3.4 Metoda izvajanja raziskovalnih tehnik

Protokol dela je predvidel izvajanje testnih intervjujev na vse tri načine (neposredno z vprašancem, spletno in kombinirano). Štirje prebivalci iz naselij na Planinskem polju so bili povabljeni k sodelovanju za testiranje pristopa in vprašalnika. Izbrani so bili na podlagi priporočil iz razgovorov s predstavniki občin Logatec in Postojna ali so se odzvali sami na povabilo k sodelovanju, podano v predstavitvi projekta v lokalnem časopisu. Testna faza izvajanja intervjujev je pokazala, da vprašalnik vprašanim ustreza, in potrdila obliko izvajanja neposrednega intervjuja. Pokazala je tudi visoke preference do izvajanja neposrednih intervjujev v primerjavi z drugimi možnimi oblikami. Na podlagi seznanitve z območjem, družbenoekonomsko strukturo prebivalstva (Statistični urad ..., 2018a) in pripravljenostjo prebivalcev za sodelovanje se je izoblikoval specifični uporabniški profil kot ciljna skupina, s katero se je udejanjil in preizkusil uporabniški modul.

Nabor vprašanih za drugi krog intervjujev je bil sestavljen na podlagi priporočil tistih, ki so že sodelovali, in priporočil sodelavcev z Inštituta za raziskovanje krasa, partnerske institucije v projektu, ki se ukvarjajo z razvojem hidrogeološkega modula ter območje Planinskega polja in tamkajšnje prebivalce zaradi stalnega terenskega dela dobro poznajo. Nekaj vprašanih je bilo izbranih tudi naključno, da so bili izpolnjeni minimalni pogoji za oblikovanje pilotnega vzorca. Skupno je bilo intervjuvanih 32 prebivalcev naselij Planinskega polja, 16 žensk in 16 moških. Povprečna starost vprašanih v vzorcu je bila 56 let, polovica je bila zaposlenih, polovica pa upokojenih. Izvajanje intervjujev je temeljilo na konceptu kvalitativnih pristopov in je tipični etnografski raziskovalni pris-

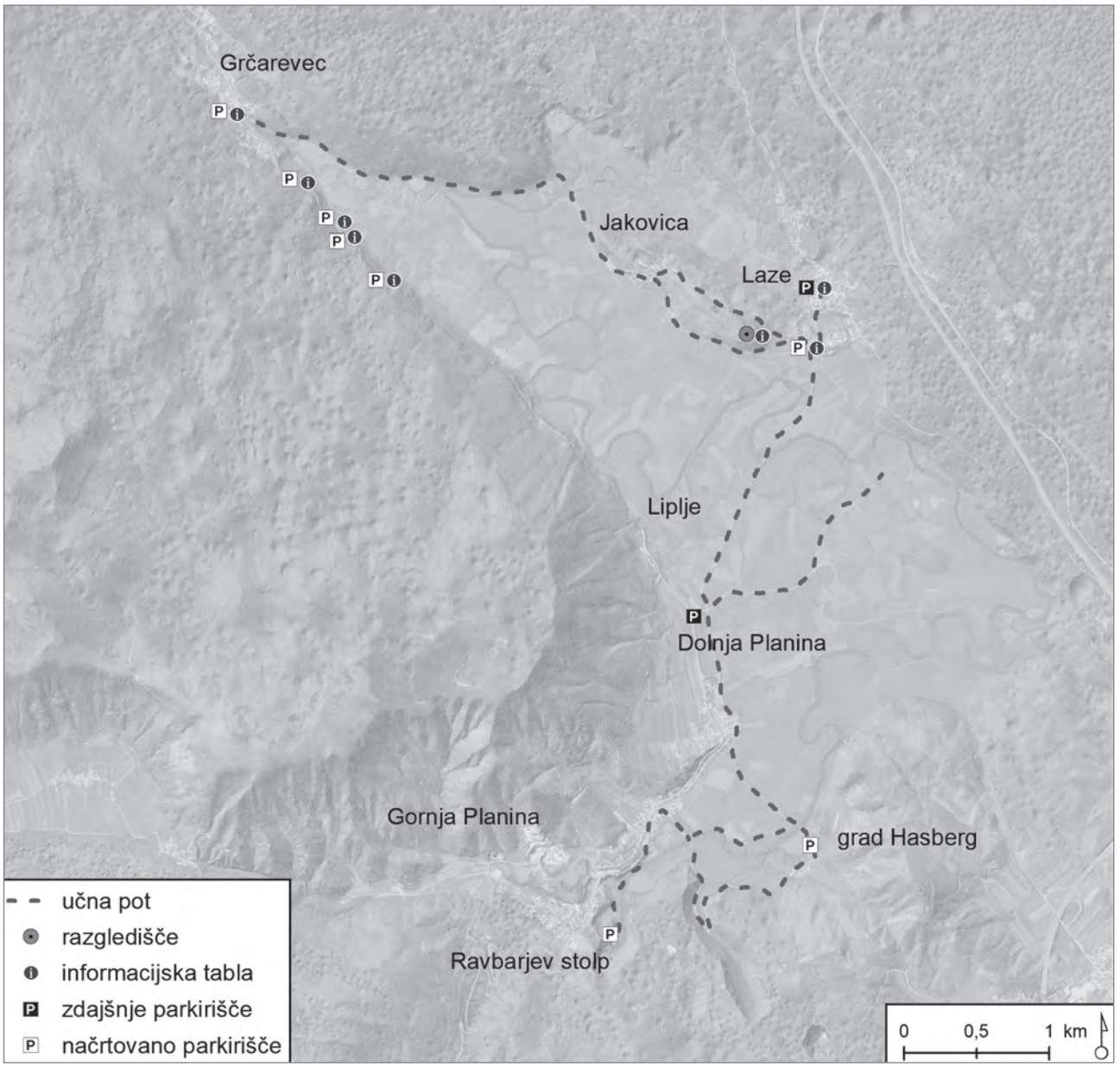


Slika 7: Primerjava kumulativnih vedenjskih zemljevidov, ki prikazujejo intenziteto uporabe poti za sprehajanje in pohode, kadar je polje poplavljeno in kadar poplav ni (avtor: Simon Koblar; vir: Geodetska uprava Republike Slovenije, 2017, 2018).

top (npr. Bernard, 2011). Intervjuji so se izvajali med 16. marcem in 9. septembrom 2017, v poletnih mesecih jih je bilo manj izvedenih. Običajno so intervjuji trajali eno do dve uri.

4 Uporabniški modul

Za potrebe zasnove uporabniškega modula celovitega modela poplavno vzdržnega prostorskega načrtovanja je bilo treba, prvič, zasnovati sistem spremljanja dinamičnih vzorcev uporab prostora in opredeliti dnevne rutine uporabnikov ter, drugič, opredeliti uporabniške skupine in glede na to pridobivanje vhodnih podatkov, ki ustrezajo značilnostim teh uporabniških skupin ali profilov. S petdelnim vprašalnikom so bile pokrite zgoraj omenjene zahteve, saj je zagotovil tri pomembne sklope podatkov: 1. dejavnosti uporabnika, 2. lokacije, kjer se te dejavnosti odvijajo, in 3. drugi pojasnjevalni podatki (npr. družbenoekonomski parametri uporabniškega profila, dojemanje bivanja na območju, ki ga prizadenejo visoke vode, in stališča o življenju na območju, ki ga prizadenejo visoke vode). S prekrivanjem podatkov o dejavnostih in lokacijah dejavnosti v prostoru smo dobili nov izvedeni podatek o tipičnih vzorcih uporabe prostora obravnavanega uporabniškega profila. Tak podatek je neposredno uporaben za interpretacijo dveh vidikov celovitega modeliranja po pristopu Hamiltonove idr. (2015): človek (dejavnosti in značilnosti uporabnika ter pojasnjevalne okoliščine) in prostor (lokacije, razsežnosti in pogostosti uporabe prostora). Ko dodamo še časovno razsežnost, ki smo jo zbirali v okviru dnevnih rutin, tak podatek upošteva še vidik časa po Hamiltonovi idr. (2015). Časovna sestavina je interpretirana tudi v vzorcih uporabe prostora, kadar ni poplav ali v obdobju poplav, (letni časi, vremenske razmere) in tako v širšem kontekstu izraža časovne razsežnosti z vidika sestavine narava. Končni rezultat, ki strne vse te razsežnosti v uporabniški modul, so uporabniško-prostorsko-časovne značilnosti obravnavanega uporabniškega profila. Shema na sliki 6 prikazuje sestavine uporabniškega modula in njihove značilnosti ter povezanost vseh informacij za celovito interpretacijo dnevne rutine uporabniškega profila.



Slika 8: Načrt za učno pot po Planinskem polju (avtor: Simon Koblar; vir: Notranjski regijski park, 2018)

4.1 Organizacija in kodiranje podatkov

Osnovna baza podatkov, zbranih z intervjuji, je bila urejena v programu Excel Microsoft Office, v katerem so bile izvedene tudi osnovne analize deskriptivne statistike in analize kvalitativnih komentarjev. S tem je bilo mogoče dobiti prvi vtis o vzorcu. Odgovori, zbrani v vsakem od petih delov vprašalnika, so bili organizirani po posameznih listih in opremljeni z identifikacijsko kodo vprašalnika. Tako urejena in organizirana podatkovna baza je bila prenesena v okolje GIS (ARcGIS 10.3.1), ki je glede na svojo programsko opremo omogočalo nadaljnjo analizo uporabniško-prostorskih odnosov.

Poleg izvedene GIS-podatkovne baze podatkov, pridobljenih z intervjuji, je bila osnovana tudi podporna GIS-podatkovna baza s pomembnimi prostorskimi podatki (npr. aerofoto posnetki, raba tal, ceste, stavbe in podatki o prebivalstvu). Takšna podatkovna osnova je omogočila, da so bili ročno zajeti vedenjski zemljevidi dnevnih rutin natančno preneseni v okolje GIS in združeni z drugimi podatki, zajetimi z vprašalnikom. Takšna zbirka podatkov je omogočila natančno analizo in filtriranje prostorskih podatkov na podlagi različnih meril. Iz celotne zbirke vedenjskih zemljevidov GIS, ki so ponazarjali digitalizirane dnevne rutine, so bili za nadaljnjo obravnavo izbrani le tisti, ki so prikazovali dejavnosti na prostem in zunaj območja doma. V nadaljevanju so za ponazoritev navedene analize uporabniško-prostorskih odnosov, ki se nanašajo na zelo pogoste ali običajne dejavnosti uporabniškega profila na Planinskem polju. Takšne dnevne rutine so bile razvrščene kot tipične in so sprehod, pohod, vožnja s kolesom, potovanje na

delo ali po različnih opravkih. Kadar so bile opravljene poti v izvornem vprašalniku le opisane, so bile glede na opis ustrezno digitalizirane in opremljene tudi s podatkom o trajanju dejavnosti na poti. Ker so nekateri vprašani oklevali pri opredelitvi časa, porabljenega za opravljeno pot, so bili manjkajoči podatki ocenjeni na podlagi drugih jasno podanih primerov.

Zaradi spoštovanja varnosti osebnih podatkov so bile opravljene poti vedno prikazane od ali do najbližjih križišč, in ne neposredno z lokacije, kjer se je pot začela ali končala. Vse dejavnosti so bile kodirane, hoja, ki se je izvajala na pretežno ravnih delih, je bila opredeljena kot sprehajanje, hoja v hribovito zaledje Planinskega polja je bila opredeljena kot pohodništvo. Če je potek dejavnosti vključeval tako uravnani del kot vzpon na hribovito zaledje, je bila hoja opredeljena kot sprehajanje in pohodništvo. Tudi vožnja s kolesom je bila opredeljena kot poseben tip dejavnosti. Glede na ocenjeni čas opravljenih poti za katerokoli dejavnost so bile upoštevane naslednje hitrosti: sprehajanje: 4,8 km/h, pohodništvo (na vrh in nazaj): 2,6 km/h, pohodništvo s ponavljajočim se vzorcem gibanja (na vrh, navzdol, spet gor in navzdol): 3,4 km/h, zmerno hitra vožnja s kolesom: 9,3 km/h, kolesarjenje: 19 km/h. Dejavnosti so bile razvrščene tudi v razrede časovnih intervalov. Trajanje dejavnosti je bilo zaokroženo na 30- ali 60-minutne intervale.

4.2 Udejanjanje in preizkus modula

To podpoglavje se bolj kot na interpretacijo rezultatov pilotnega primera nanaša na prikaz potencialne uporabnosti in principov modula ali predlaganega pristopa. Rezultati so namenjeni predvsem za ponazoritev možnega prispevka takega modula k celovitemu modelu poplavno vzdržnega prostorskega načrtovanja in k prostorskemu načrtovanju, ki vključuje poplavno varnost ali poplavno vzdržno prostorsko načrtovanje.

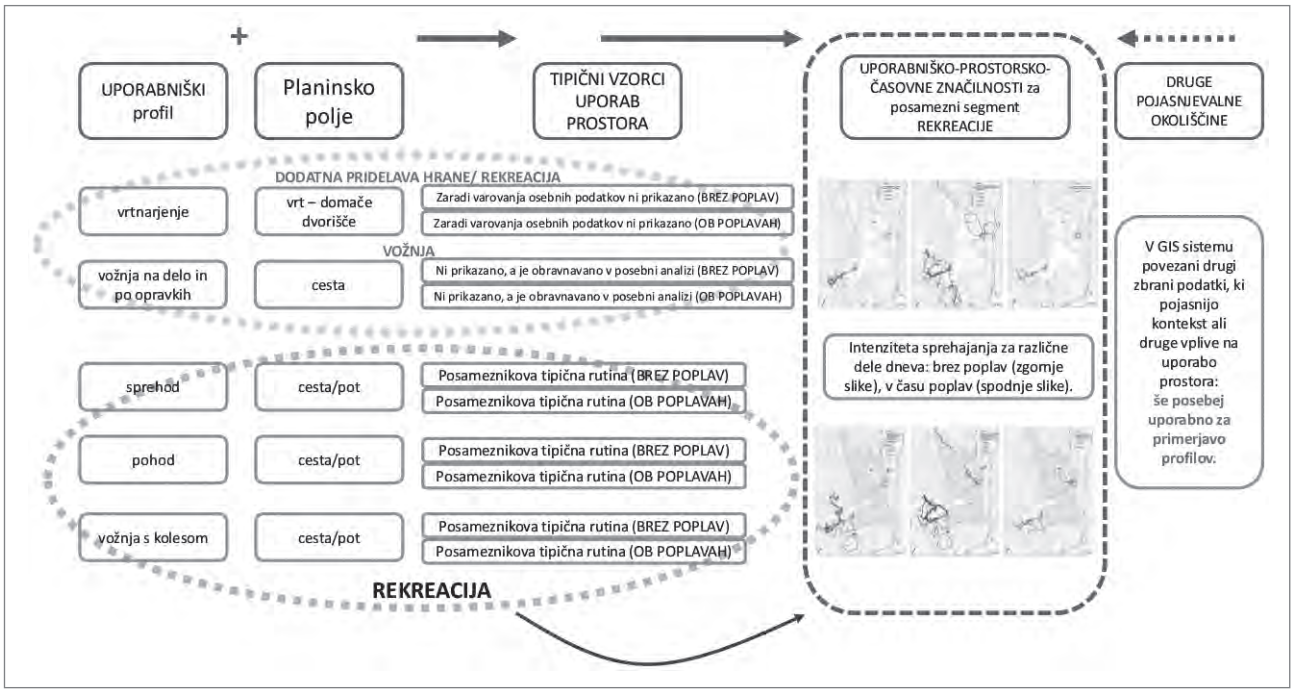
4.2.1 Analize in interpretacija zbranih podatkov

Najprej je treba analizirati značilnosti uporabnikov prostora (vprašanih) in ugotoviti, koliko različnih profilov je mogoče opredeliti na območju. Za ponazoritev, osnovna opisna statistika zbranih podatkov je pokazala, da je v okviru pilotnega preskusa na Planinskem polju mogoče opredeliti uporabniški profil dobro izobražen starejši (50 % ji ima univerzitetno izobrazbo, 41 % jih ima srednješolsko izobrazbo), ki je precej navezan na okolje, v katerem živi (četrtina vprašanih dela v kraju bivanja, četrtina jih na delo potuje v druge statistične regije, upokojenci so večinoma doma). Visoko stopnjo navezanosti na domače okolje je mogoče interpretirati tudi zaradi dejstva, da želijo kljub poplavni dinamiki polja vsi vprašani razen enega (razlog so težave, povezane s staranjem) še naprej ostati v kraju. V vzorcu je bila polovica vprašanih domačinov, polovica pa priseljenih. Z vidika ekonomskih zmožnosti je mogoče izoblikovani uporabniški profil dodatno opredeliti kot dobro situiran (več kot 60 % vprašanih dobro shaja, 25 % jih meni, da zmorejo brez težav pokriti običajne izdatke). Tudi z vidika zmožnosti za kritje stroškov hobijev in podobnih dobrin, ki izražajo zadovoljevanje osebnega interesa, jih 25 % meni, da si to lahko privoščijo, 25 % jih meni, da zmorejo, in 50 % jih meni, da to še nekako zmorejo.

Po opredelitvi uporabniškega profila sledijo GIS-analize in interpretacije posameznih dnevnih rutin in njihovih značilnosti. Rezultat so karte z lokacijami in časovnimi razsežnostmi - kdaj in kako dolgo se je posamezna dejavnost odvijala in kdo je bil vpet v to dejavnost (kategorizirano po starostni skupini, spolu ali glede na status, npr. zaposlen ali upokojenec). Nadaljnje analize se nanašajo na intenziteto uporabe, tj. kje, kdaj, kako dolgo in kako pogosto se ljudje ukvarjajo z neko dejavnostjo. Rezultat so karte s skupnimi vedenjskimi zemljevidi, na katerih so prikazane vse dejavnosti vseh vprašanih in so lahko razvrščene po različnih prostorsko-časovnih kategorijah. Za ponazoritev, slika 7 prikazuje primerjavo kumulativnih (skupnih) vedenjskih zemljevidov intenzitete uporabe poti za sprehajanje in pohode, kadar je polje poplavljeno in kadar poplav ni.

Takšne analize omogočajo interpretacijo pogostosti in intenzitete uporabe prostora. V prostorskem načrtovanju ali odločanju lahko razkrijejo potencialne nosilne zmogljivosti prostorov glede na spremembe, ki nanje vplivajo (npr. poplave ali pojavnost visokih voda). Za ponazoritev, primer Planinskega polja pokaže, da tudi, kadar je polje poplavljeno, rekreacija, kot na primer sprehajanje in/ali pohodništvo, ni pomembno okrnjena. Prav nasprotno, poplave na Planinskem polju pritegnejo obiskovalce, da uživajo v slikoviti krajini ter svoje običajne rekreacijske poti prilagodijo in se sprehajajo po neogroženih predelih. Vpliv na spremembo izbire poti je večji na severnem delu polja, kjer so poti čez travnike pod vodo, zato ljudje uporabljajo druge, višje ležeče poti, navadno kar ceste. Jugozahodni del, to je območje Malenščice, se hitro napolni z vodo, zato slikovite sprehajalne poti med Unico in Malenščico ter tiste, ki potekajo po gozdnem zaledju proti Haasbergu, niso na voljo. Kot alternativo za sprehajanje ljudje izberejo cesto, ki povezuje Gornjo Planino in Haasberg, ali celo – verjetneje – odidejo v gozd na pobočju. Poleg tega analize dnevnih rutin pokažejo tudi, da je zaradi poplav skupni čas rekreacije podaljšan. To še posebej velja za prebivalce Laz, ki se po dostopni (obvozni) cesti Laze–Ivanje selo odpeljejo na južni del in se sprehajajo po dostopnih poteh na območju Haasberga. Zanimivo je, da v konkretnem pilotnem primeru oblikovanega uporabniškega profila poljske poti v slikovitem južnejšem delu Planinskega polja niso izbrane za rekreacijo niti, kadar je dno polja suho.

To je še posebej zanimivo z vidika načrta nove učne poti (Notranjski regijski park, 2018), s katero naj bi se povezali nekate-



Slika 9: Koraki, ki privedejo do prostorsko-časovnih značilnosti uporabniškega profila (shema: Barbara Goličnik Marušić)

ri zanimivi deli Planinskega polja. Načrtovana pot v mnogih odsekih poteka po poteh, ki jih lokalno prebivalstvo pogosto uporablja za rekreacijo (jugovzhodni del Planinskega polja), vendar vključuje tudi pot k reki Unici, ki je v obravnavanem pilotnem primeru nihče od vprašanih ni izbral kot del svoje rekreativne poti. Čeprav ta del novo načrtovane učne poti tudi v času običajnih poplav ni poplavljen, za obravnavani uporabniški profil ne predstavlja priljubljene tipične dnevne rutine za rekreacijo. Preostali deli predlagane nove učne poti, ki ob visokih poplavah navadno niti ne bi bili dostopni, so glede na izbiro prostorov za sprehode z vidika obravnavanega pilotnega uporabniškega profila opredeljeni kot pogosto uporabljeni za sprehode. V takih primerih se empirično znanje, ki ga je mogoče pridobiti v okviru uporabniškega modula, lahko uporabi za preveritev ustreznosti obstoječih ali načrtovanih posegov v prostor.

Na podlagi takšnih nizov z GIS-i podprtih drobnih in kvalitativnih podatkov, ki vsebujejo povezane uporabniško-prostorsko-časovne značilnosti, je mogoče proučevati tudi časovne vidike in se do uporabe prostora opredeliti tudi na podlagi časovnih razsežnosti. Za ponazoritev, v obravnavanem pilotnem primeru je pogostost uporabe poti za sprehajanje čez teden in ob koncih tedna najvišja spomladi, in to pozno popoldne. Čez teden je ta časovni interval zasedbe prostora nekoliko poznejši, med 15.30 in 18.00, ob koncih tedna po kosilu, med 13.00 in 15.30. Tako lahko na primer vedenjski zemljevidi, ki so rezultat uporabniškega modula, pokažejo, katere poti in kako intenzivno so v rabi v posameznem časovnem delu dneva.

Modul omogoča tudi proučevanje značilnosti uporabniškega profila glede na vključevanje uporabnikov v odprti prostor, na primer prepoznavanje in komentiranje rekreacijskih navad lokalnega prebivalstva v času poplav in kadar polje ni poplavljeno. Na primer, v konkretnem pilotnem primeru ljudje za rekreacijo, kot je sprehajanje v neposredni bližini doma, porabijo pol ure ali se odpravijo na daljši sprehod/pohod, ki lahko traja tudi do tri ure. To pomeni, da izbirajo med sprehodi, dolgimi od 1 do 10 km. Primerjalna analiza dnevnih rutin kot analitično orodje lahko pokaže tudi, kako se spreminja izbira sprehajalnih poti zaradi poplavljenosti. V procesu prostorskega načrtovanja je pristop z uporabniškim modulom lahko v pomoč pri prepoznavanju in obravnavi zmogljivosti prostora za zasedbo in je z vidika presoje ustreznosti organizacije prostora za neko dejavnost (npr. neko vrsto rekreacije) uporaben za vrednotenje odločitev o možnih ali načrtovanih spremembah rabe prostora. V konkretnem pilotnem primeru je analiza uporabniško-prostorskih razmerij na podlagi uporabniškega modula pokazala, da poplave ne vplivajo na rutino izvajanja rekreacije (sprehod/pohod) v le dveh od devetnajstih primerov.

V procesu snovanja modula je bila posebna pozornost namenjena delom vprašalnika za pridobivanje t. i. pojasnjevalnih podatkov, kot na primer o stopnjah ogroženosti in škodi, povezani s poplavami, o izkušnjah s poplavami in odnosu do njih ter o vzročnih povezavah med človekovim delovanjem v prostoru in dinamiko poplav. Pilotni primer je pokazal, da lahko s pridobivanjem takšnih podatkov ali vključevanjem lokalnega znanja pridobimo informacije o zelo raznovrstnih primerih, ki se pojavljajo na razmeroma majhnem prostoru. Ob tem je mogoče

potrditi hipotezo, da prebivalci območij, ki so pogosto poplavljena, te sprejemajo kot značilnost svojega bivalnega okolja in jih dojemajo kot del vsakdana. Z zasnovanim uporabniškim modulom je bilo mogoče pridobiti dodatne informacije lokalnega prebivalstva o nekdanjih in sedanjih uporabah prostora in o tem, kako bi potekalo spontano prilagajanje posameznikov in skupnosti na poplavne dogodke. Glede na velikost in strukturo vzorca vprašanih rezultatov nismo povezovali s podskupinami uporabnikov, ampak smo jih obravnavali kot splošne vhodne podatke pri proučevanju odnosov med ljudmi in naravo za potrebe prostorskonačrtovalske prakse.

4.2.2 Vrednotenje modula kot analitičnega in interpretacijskega orodja za prostorsko načrtovanje

Uporabniški modul temelji na jasnem konceptu, po katerem je glavno vodilo vključevanje prostorsko-časovnih razsežnosti človekovega bivanja v prostoru. Temelji na predpostavki, da so takšne informacije ključne za odzivno in trajnostno načrtovanje, in to prikaže na primerih, povezanih s poplavami. Uporabniški modul omogoča pridobivanje drobnih (majhnih, mehkih in kakovostnih) podatkov, povezanih z vsebinami in procesom od spodaj navzgor. Sledi protokolu, ki vključuje ustrezne metode in tehnike, ter omogoča ponovitve izvajanja teh metod in tehnik na poljubnem (novem) območju obdelave.

Pri izvajanju analitičnih korakov uporabniškega modula se najprej obravnavajo prostorsko-časovni podatki o uporabi prostora (dnevne rutine, pridobljene z vprašalnikom v drugem in četrtem delu), ki se nato križno analizirajo in interpretirajo s paketom pojasnjevalnih podatkov (prvi, tretji in peti del vprašalnika). Koraki, ki privedejo do prostorsko-časovnih značilnosti uporabniškega profila in so bili izvedeni v testnem primeru, so prikazani na sliki 9.

Podatki, ki so zbrani v okviru uporabniškega modula in se nanašajo na neko lokacijo, so lahko uporabni v različnih fazah načrtovanja prostora na lokalni ravni. Prispevek je pokazal uporabnost modula za analitične faze ali pripravo strokovnih podlag. Modul je na strateški ravni uporaben kot pomoč pri oblikovanju specifičnih ciljev ali kot vir informacij za oblikovanje razvojnih scenarijev. Z analizo časovnih okvirjev in uporabniško-prostorskih značilnosti je mogoče raziskati, kdaj, kako dolgo in s kakšno intenziteto so deli obravnavanega območja v rabi. To načrtovalcu omogoča preverjanja ali sklepanja o možnostih sobivanja različnih uporab prostora na obravnavanem območju. S tem modul obravnava tudi kompleksno tematiko večfunkcionalnih krajin. Lahko je uporaben kot orodje za njihovo prepoznavanje ali za oceno potenciala večfunkcionalnosti prostora (z družbenega ali uporabniškega vidika). Poleg možnosti uporabe v več korakih procesa načrtovanja (npr. analize, postavitev ciljev, razvoj vizije ali strategije) je koncept modula lahko dragoceno orodje za spremljanje in analize uporabe prostora, tj. primerjanje sprememb v dinamiki uporabe pred posegih ali spremembi prostorske ureditve in po tem. Posredno (s posplošitvijo podatkov) so takšni podatki uporabni tudi na drugih ravneh načrtovanja, npr. regionalni, nacionalni. Če so izvirni podatki, ki so bili pridobljeni po načelu od spodaj navzgor, ustrezno posplošeni, lahko podprejo ali pomagajo opredeliti razvojna vprašanja na višjih načrtovalsko-odločevalskih ravneh in s tem vključijo vprašanja lokalnega pomena v širši (prostorski) kontekst. Dnevna rutina kot osrednji predmet proučevanja uporabniškega modula je lahko neposredno uporabna tudi kot koncept pri celovitem načrtovanju mobilnosti in izvajanju mobilnostnih načrtov.

5 Sklep

Prispevek obravnava potrebo po razumevanju, priznavanju in vključevanju merila človekovih dejavnosti in njihovih razsežnosti v prostoru kot ene pomembnih sestavin dinamičnih sistemov v (poplavno vzdržnem) prostorskem načrtovanju. Uporabniški modul je uvedel človekove dnevne rutine, ki kot procesi lahko vplivajo na naravne dinamične sisteme ali se odzivajo nanje kot vire relevantnih podatkov za proučevanje dinamičnih sistemov v prostoru. Pristop neposredno ne obravnava koncepta vključevanja javnosti, temveč spodbuja vključitev t. i. majhnih, mehkih in kvalitativnih podatkov v proces načrtovanja, da bi s tem dobili čim boljši vpogled v interakcije med človekom in njegovim okoljem ter prispevali k odgovornejšemu upravljanju in načrtovanju prostora. Prikazuje potencial za prenos metode, ki temelji na zbiranju podatkov od spodaj navzgor, da bi lahko prostorsko načrtovanje in dejavnosti, povezane z njim, na tej podlagi zagotavljali ustrezne rešitve za dejanske razmere v merilu 1 : 1. Navedeni pristop (uporabniški modul) na analitični ravni obravnava uporabo prostora v času in prostoru prav v merilu 1 : 1. V proces načrtovanja je vnesel informacije o dejanskih odnosih med prostorom in njegovimi uporabniki ter obenem celoten proces obravnave prostora ohranil vpet v dejanske prostore in njihove (ne)prostorske značilnosti. Ob različnih konceptih vključevanja deležnikov uporabniški modul, ki se osredotoča na vključevanje uporabnika prostora s proučevanjem uporabe kot prostorske sestavine z jasno izraženimi uporabniško-prostorsko-časovnimi dimenzijami, ponuja nove možnosti in izzive za drugačen pogled na načrtovalsko prakso v prihodnosti.

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Nika Murovec
Damjan Kavaš

Revitalizacija stavb kulturne dediščine na podlagi kreativnega in kulturnega sektorja; predstavitev projekta Forget Heritage

Kako izkoristiti skriti potencial kulturne dediščine za izboljšanje kakovosti življenja meščanov ter kako hkrati ponuditi nove priložnosti in dodatna upravljavska znanja kulturnemu in kreativnemu sektorju? S temi vprašanji se ukvarja triletni projekt Forget Heritage, ki je projekt v okviru programa Interreg Srednja Evropa. Glavni namen sodelovanja partnerskih mest, med katerimi je tudi Ljubljana, je prepoznati inovativne, ponovljive in vzdržne javno-zasebne modele upravljanja opuščenih stavb kulturne dediščine ter tem stavbam na podlagi kulturnega in kreativnega sektorja dati dodatno vrednost.

Projekt obravnava problematiko večine mest, v katerih so neizkoriščene stavbe, ki so tako ali drugače zaznamovale zgodovino lokalne skupnosti. Pri tem običajno ne gre za najširše prepoznavne stavbe kulturne dediščine, temveč javnosti manj opazne stavbe, kot so nekdaj pomembne tovarne, bolnišnice, šole ali bunkerji, ki so danes opuščeni, skupaj s stavbami pa bledi tudi zgodovinski spomin. Funkcionalnost takšnih stavb je pogosto omejena. Spreminjajo se v urbane praznine in negativno vplivajo na bližnjo okolico. Čeprav so v vsakem mestu prisotne težnje po rušenju takšnih starih stavb in grajenju novih stanovanjskih ali poslovnih kompleksov zaradi razvoja mesta, so prav takšne urbane praznine že večkrat izkazale potencial, da se preoblikujejo v glavni gonilnik razvoja v svoji okolici. Ne samo, da predeli z manjšimi stavbami različne starosti mestu dajo značaj in dodaten šarm, so tudi temelj za razna lokalna podjetja in inovativna nova podjetja. Novi, veliki poslovni kompleksi nudijo primeren prostor za največja podjetja, ki si takšen prostor sploh lahko privoščijo, starejše, skromnejše in manj očitne stavbe pa pogosto gostijo pomembne motorje razvoja. Ideja projekta Forget Heritage izhaja iz znane misli Jane Jacobs: »Stare ideje lahko včasih uporabijo nove zgradbe. Nove ideje potrebujejo stare zgradbe.« Katere koli zares nove ideje so namreč v začetni fazi vedno precej tvegane, ne glede na svoj potencial. Takšne ideje vedno potrebujejo prostor za eksperimentiranje, prostor, kjer so dovoljene tudi napake.

Ena od značilnosti večjih mest je tudi večja koncentracija kulturnega in kreativnega sektorja. Kreativci zagotovo spadajo v skupino tistih, katerih ideje si mesta želijo privabiti, vendar za svoje delovanje potrebujejo cenovno dostopen in funkcijsko prilagodljiv prostor. Avtentičnost in značaj, ki ju prinaša zgodovina stavbe (čeprav ne tako oddaljena), za kreativce običajno pomeni dodano vrednost. Potrebo kreativcev po primernih prostorih in najrazličnejše koristi (od družbenih do gospodarskih), ki izvirajo iz prepustitve prav takšnih prostorov kreativcem, smo prepoznali tudi projektni partnerji. V okviru projekta Forget Heritage zato poskušamo takšne prostore opredeliti ter prispevati znanje in orodja, s katerimi bi pripomogli k čim boljšemu izkoriščanju njihovega skritega potenciala na podlagi kulturnega in kreativnega sektorja. Pri tem poskušamo sočasno izboljšati medsebojno poznavanje in razumevanje dveh glavnih akterjev v tem procesu – javne uprave in kreativcev ter s skupnimi močmi poiskati finančno vzdržne modele, jih preizkusiti in s tem postaviti zglede, ki bodo lahko v navdih tudi drugim mestom.

Znanje, ki bo v okviru projekta zbrano z vključevanjem različnih javnosti, izmenjavo izkušenj, usposabljanji in raziska-

vami, bo preizkušeno v osmih pilotnih projektih, priporočila pa bodo predložena tudi drugim mestom. Pilotni projekti so zelo različni – tako v vsebinskem kot prostorskem smislu. Obsegajo od na primer multidisciplinarnega kreativnega centra v mreži zgodovinskih stavb v centru Genove do medkulturnega projekta vrtnarjenja, ki v socialni inovaciji združuje begunce in kreativce v Nürnbergu. V Sloveniji se pilotni projekt odvija na Vodnikovi domačiji, kulturnem spomeniku lokalnega pomena. V stavbi, ki je znova zaživela kot hiša branja, pisanja in pripovedovanja, sta se v prenovljenih in prej neizkoriščenih sobah v prvem nadstropju razvila nov izobraževalni program in soba za pisanje (ang. *Writers' Hub*). Tu potekajo različne delavnice in mentorski programi s področja pisanja ter drugi spremljajoči dogodki, hkrati pa imajo avtorji tudi možnost uporabe ene od štirih miz v skupnem prostoru za sodelo (ang. *coworking*). Program sobe za pisanje tako povsem sovpada z rdečo nitjo programa celotne domačije, ki se skozi knjigo domiselno navezuje tudi na številna druga področja kreativnega in kulturnega sektorja, od uprizoritvene umetnosti in umetniškega ustvarjanja do glasbe in kulturne vzgoje.

Za namen posredovanja znanja je kot eno izmed ključnih orodij projekta, namenjenih tako upravljavcem kot odločevalcem, nastal Priročnik za upravljanje stavb kulturne dediščine. Priročnik je nastal na podlagi mednarodnih izkušenj in zapolnjuje vrzel na področju literature o podjetniški revitalizaciji kulturne dediščine. Je vir praktičnih potreb, strukturiranih pristopov in primerov dobrih praks. Prvi del priročnika je namenjen javni upravi, ki v njem lahko najde priporočila za številne izzive, s katerimi se srečuje pri upravljanju stavb kulturne dediščine. V priročniku so tudi informacije o tem, kako vzpostaviti nove vrste sodelovalnega razvoja (vključno s pristopi od spodaj navzgor) in katera orodja so se pri sodobnih strategijah revitalizacije že izkazala kot učinkovita.

Slika 1: Projektna delavnica (foto: Motovila)

Drugi del priročnika je namenjen raznim pobudam revalorizacije in prihodnjim upravljavcem stavb kulturne dediščine. V njem je ponazorjen model upravljanja za projekte revalorizacije kulturne dediščine, ki po korakih vodi skozi vse pomembne naloge oziroma izzive - od ideje in oblikovanja ciljev do finančnega in časovnega načrta. Priročnik je praktično usmerjen in ponuja številne konkretne primere, v prilogah pa je tudi delovno gradivo, ki ga je mogoče natisniti in neposredno uporabiti kot pomoč pri hitrejšem in ustreznejšem odzivu na razne izzive upravljanja. Priročnik je dostopen tako v slovenskem kot angleškem jeziku, in sicer na spletni strani projekta in na spletnih straneh obeh slovenskih partnerjev – Inštituta za ekonomska raziskovanja in Regionalne razvojne agencije ljubljanske urbane regije.

Na omenjenih spletnih straneh so dostopna tudi vsa druga pomembnejša gradiva, nastala v okviru projekta. Na podlagi vnaprejšnjih lokalnih analiz zakonodaje in politik smo partnerji pripravili Priročnik o politikah za revitalizacijo opuščenih stavb kulturne dediščine v srednjeevropskih mestih. Ta priročnik poleg pregleda nacionalnih praks glede varovanja in (ponovne) uporabe stavb kulturne dediščine ter s tem povezane veljavne zakonodaje na lokalni, regionalni in nacionalni ravni vsebuje tudi priporočila za izboljšave ter navaja nekatere priložnosti in utemeljitve za finančno podporo projektov revitalizacije. Na podlagi predhodno izvedene analize v partnerskih državah je nastala tudi analiza prenosljivih elementov dobrih praks upravljanja stavb kulturne dediščine, v kateri so izpostavljeni nekateri pomembni dejavniki, ki so skupni različnim uspešnim primerom upravljanja. V sodelovanju z oddelkom za arhitekturo in oblikovanje univerze v Genovi in oddelkom za kulturo mesta Genova so bile pripravljene tudi Smernice za vključevanje meščanov v valorizacijo stavb kulturne dediščine. Te so bile razvite na podlagi teoretičnih raziskav in rezultatov empiričnih raziskav projektnih partnerjev ter poleg analize obstoječih operativnih modelov vključujejo tudi predlog operativne sheme kot delovnega načrta za vzpostavitev vključevanja deležnikov v proces prenove kulturne dediščine. V okviru delovnega sklopa projekta, ki se ukvarja z usposabljanjem upravljavcev kulturne dediščine, je bil poleg brezplačnih usposabljanj, ki so potekala v vseh partnerskih mestih, pripravljen tudi transnacionalni model usposabljanja za upravljanje zgodovinskih znamenitosti. To orodje je namenjeno vsem posameznikom, ki so odgovorni za začetek izvajanja razvojnih programov za usposabljanje in razvoj kompetenc pri upravljanju premalo izkoriščenih

ali opuščenih zgodovinskih znamenitosti. Še eno od pomembnejših orodij projekta, ki bo v kratkem dokončano, je spletna aplikacija. Imela bo predvsem dve glavni funkciji - omogočala bo opredelitev in popis primernih opuščenih prostorov v partnerskih mestih ter pridobivanje povratnih informacij meščanov in drugih deležnikov v zvezi s pilotnimi projekti in drugimi prostori.

Po preteku faze testiranja razvitih orodij v pilotnih projektih ter vmesne in končne evalvacije bo med drugim pripravljena tudi strategija upravljanja kulturne dediščine z uporabo kulturnega in kreativnega sektorja, ki naj bi jo podprli tudi oblikovalci politik v partnerskih regijah. Upravljavec Vodnikove domačije bo aktivnosti, ki so bile razvite v okviru projekta Forget Heritage (izobraževalni program in soba za pisanje), izvajal tudi po koncu projekta. Po koncu projekta se bodo nadaljevali tudi preostali pilotni projekti v partnerskih mestih, znanje, ustvarjeno v okviru projekta, pa bo lahko v navdih in izhodišče pri upravljanju stavb kulturne dediščine tudi v drugih mestih. Projekt torej prinaša številne trajne pozitivne učinke: z revitalizacijo stavb kulturne dediščine neposredno izboljšuje vizualno privlačnost vključenih mest, posredno pa tudi kakovost življenja v njih, z ohranjanjem zgodovine povečuje občutek pripadnosti skupnosti, povečuje turistične tokove, omogoča številne priložnosti kulturnemu in kreativnemu sektorju in ne nazadnje spodbuja tudi ustvarjanje novih delovnih mest, podjetništvo in gospodarsko rast.

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Informacije o projektu in gradivo

Domača stran projekta: https://www.interreg-central.eu/Content.Node/Forget-heritage.html

Inštitut za ekonomska raziskovanja: http://www.ier.si/menu-298.php

Regionalna razvojna agencija ljubljanske urbane regije: http://www.rralur.si/sl/projekti/forget-heritage

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Residential satisfaction questionnaires: A systematic review

Residential satisfaction is a topic that has been extensively studied in recent decades because it can offer important insights into the quality of the residential environment. However, many inconsistencies and unanswered questions on this topic still persist. Because the understanding of any field of inquiry is importantly affected by the quality of the methodology and measurement instruments employed, this article explores the current state of development and investigation of the psychometric properties of one of the most widely employed methods of measuring residential satisfaction: self-assessment questionnaires that measure satisfaction by assessing satisfaction with specific aspects of the residential environment. A review of representative studies shows a general lack of properly developed and validated questionnaires, lack of sufficient reporting on the origin, development, and psychometric characteristics of the questionnaires employed, and often too little thought and effort invested in developing and validating questionnaires. Such observations are especially important for evaluating the quality of studies and their implications for residential satisfaction, and they are the points where research practice could be improved.

Keywords: residential satisfaction, questionnaire development, psychometric evaluation, review

1 Introduction

Research on residential satisfaction has taken place for decades in disciplines such as planning, geography, sociology, and psychology (Lu, 1999), and has recently gained renewed interest and yielded insightful developments (Dekker et al., 2011; Aigbavboa & Thwala, 2016; Wang & Wang, 2016). Residential satisfaction has been identified as an important component of life satisfaction, wellbeing, and general quality of life (Lu, 1999; Wang & Wang, 2016), and, because it represents a subjective evaluation of the residential environment, it determines the way individuals respond to their environment (Lu, 1999). From a broader perspective, the importance of residential satisfaction research rests in the fact that many housing policies in different parts of the world often include improving residents' satisfaction with their housing environment as one of their main objectives (Wang & Wang, 2016). To achieve these objectives, an understanding of determinants of residential satisfaction is required (Aigbavboa & Thwala, 2016), and, to evaluate whether the objectives of these policies have been met, a good understanding of whether individuals are satisfied with their residential environment is of utmost importance (Wang & Wang, 2016).

To truly understand residential satisfaction, its determinants, and its implications, it first must be adequately measured (Gifford, 2014). In the history of residential satisfaction research, the most common way of quantifying it is through self-assessment questionnaires, which mostly take one of two main approaches (see Pinquart & Burmedi, 2003): either by measuring residential satisfaction with one or more global or general questions about satisfaction with overall or specific level(s) of the residential environment (Lu, 1999; Li & Song, 2009; Dekker et al., 2011) or by assessment through asking respondents about levels of satisfaction with specific aspects or components of the residential environment (Wang & Wang, 2016), usually resulting in a residential satisfaction index of some form.

Even though research on residential satisfaction has been present for a long time, to the best of our knowledge, no systematic review of the questionnaires employed in studies on residential satisfaction has been published yet. This qualitative systematic review article focuses on reviewing the psychometric quality of questionnaires for assessing residential satisfaction, particularly on psychometric evaluation of the questionnaires that assess satisfaction with a collection of aspects of the residential environment.

1.1 Literature review

Residential satisfaction is a multidimensional concept that has been defined in several different theories and frameworks (e.g. Amérigo & Aragonés, 1997; Parkes et al., 2002; Shin, 2016). Most commonly it is conceptualized as the perception of how the actual residential environment meets an individual's residential aspirations (Lu, 1999), therefore representing individual's cognitive responses to the residential environment (Wang & Wang, 2016).

Residential satisfaction can be divided into satisfaction with one's dwelling (housing satisfaction), satisfaction with one's neighbourhood (neighbourhood satisfaction), and general satisfaction with the area (community satisfaction; Pinquart & Burmedi, 2003), which are usually considered separate components of residential satisfaction (Dekker et al., 2011) and are therefore mostly assessed and analysed separately (Aigbavboa & Thwala, 2016). As Buys and Miller (2012) point out, the majority of research on residential satisfaction has focused on only one of these three levels of the residential environment, with satisfaction at the level of neighbourhoods being most focused on, whereas much less is known about satisfaction at the level of dwellings (Aigbavboa & Thwala, 2016). Studies simultaneously assessing more than one of these domains are rare, despite the growing recognition that these domains of residential satisfaction are interrelated and share an overlap of predictors (Parkes et al., 2002). When residential satisfaction is being assessed, individuals implicitly evaluate their current housing situation with regard to more than one level (Galster & Hesser, 1981; Adriaanse, 2007); specifically, interrelatedness is obvious in the assessment of one's housing, which is likely to include its immediate surroundings and even relationships with neighbours (Lu, 1999; Aigbavboa & Thwala, 2016).

There is an extensive body of literature on the conceptualization, measurement, and determinants of residential satisfaction (e.g., Lu, 1999; Dekker et al., 2011; Wang & Wang, 2016). Special interest lies in which aspects of the residential environment predict residents' (global) residential satisfaction (Parkes et al., 2002). Studies to date have revealed some important determinants; namely, housing conditions, neighbourhood characteristics, and household economics (e.g., closeness of neighbourhoods to employment and recreation opportunities, the general appearance of a neighbourhood, the socioeconomic composition of residents, availability of services, etc.; e.g., Wang & Wang, 2016). This question is difficult to address because studies on residential satisfaction vary greatly in many aspects; for example, in the sample characteristics (from nationwide surveys to surveys of individual neighbourhoods) and the range of variables included (Parkes et al., 2002). They often

yield contradictory findings on the predictors of residential satisfaction; for example, fear of crime or feelings of safety in some studies proved to be the most important predictors of neighbourhood satisfaction, whereas other studies found that this is a less important predictor in comparison to environmental variables such as sunlight and noise (Parkes et al., 2002), and a similar situation exists regarding crowdedness or population density in the neighbourhood (Wang & Wang, 2016).

There are many inconsistencies in empirical findings on residential satisfaction and, as Lu (1999) points out, at least part of them may be attributable to frequently different definitions of a key residential satisfaction variable among the studies – which, along with differences in model specification and the type of data collected, prevent a direct comparison of studies' results. Therefore, "the way residential satisfaction is measured is important in empirical analysis because it directly influences the findings" (Lu, 1999: 270).

Two main approaches to measuring residential satisfaction are assessment of general satisfaction and assessment of satisfaction with various aspects of the residential environment (Lu, 1999; Dekker et al., 2011; Wang & Wang, 2016). Although the majority of studies on residential satisfaction employ the approach of single-item indicators (115 studies versus forty-seven studies that employed sum-scales, as reported in a meta-analysis by Pinquart & Burmedi, 2003), measuring residential satisfaction might not be as simple as asking respondents whether or not they like their apartment or neighbourhood. It is known that the satisfaction of a resident can vary depending on many factors; for instance, the standard of comparison individuals have in mind when responding to questions on residential satisfaction and various aspects of the environment (e.g., based on the way these are used by the resident; Gifford, 2014; see also Jansen, 2013, 2014, for a discussion on why residential satisfaction usually proves to be relatively high across various conditions). Therefore, it is unlikely that a single question about satisfaction with the residential environment could be an accurate measure of what residents really think about their environment (Parkes et al., 2002).

The second approach – measuring responses to multiple items addressing various components of the environment – most commonly involves preparing a list of attributes of the residential environment that are potentially desirable or deemed important for residents and residential satisfaction, and asking respondents to express their satisfaction with them or (dis) agreement with statements reflecting attitudes toward these attributes, usually on a Likert-type scale. These ratings are then summed up in an additive index to represent an aggregate measure of residential satisfaction (Lu, 1999; Adriaanse, 2007). Some of the main pitfalls in this type of measurement include the arbitrariness with which additive measures are often constructed and individuals being likely to attach different levels of importance to various attributes of their housing environment for their satisfaction, which is very challenging to understand well, making the construction of a reliable measure very difficult (Lu, 1999). With this in mind, some researchers advocate against using this type of measure and claim that an overall measure is a better choice because it avoids these complications altogether (e.g., Lu, 1999). Although following their advice might be justified, it must be acknowledged that residents' opinions about the specific aspects of their environment might offer important insights; for example, they have the potential to reveal which neighbourhood characteristics have a positive/negative and greater/lesser impact on overall residential satisfaction (Adriaanse, 2007). Therefore, it is a great limitation of a study if residential satisfaction is assessed only through a general question without also focusing on specific attributes of the residential environment (Buys & Miller, 2012), all of this under the assumption that the research is based not only on mere lists of physical and social characteristics arbitrarily defined by the researcher. This is often the case because there is an absence of selection criteria for the attributes included because only a minority of studies have explored the relationship between satisfaction with specific attributes and overall assessments of residential satisfaction (Adriaanse, 2007).

Drawing attention to contradictions among findings in residential satisfaction research and the many questions to be answered regarding assessment, the fundamental question of appropriateness and quality of measures used in residential satisfaction research arises. The importance of this question is reflected in the quote from Furr and Bacharach (2013: 2): "If something is not measured or is not measured well, then it cannot be studied with any scientific validity. If you wish to interpret your research findings in a meaningful and accurate manner, then you must evaluate critically the data that you have collected in your research."

1.2 Research questions

The main objective of this review is to evaluate the development and psychometric properties of residential satisfaction questionnaires that measure satisfaction by assessing opinions on specific aspects of the residential environment and are focused on residential satisfaction with housing and neighbourhood because these represent the most personal and immediate home environments (Pinquart & Burmedi, 2003). We focus on the current state of questionnaires used to study residential satisfaction and explore the options for improving existing practices, rather than providing a detailed discussion of attaining a psychometric standard for each of the very heterogeneous group of questionnaires.

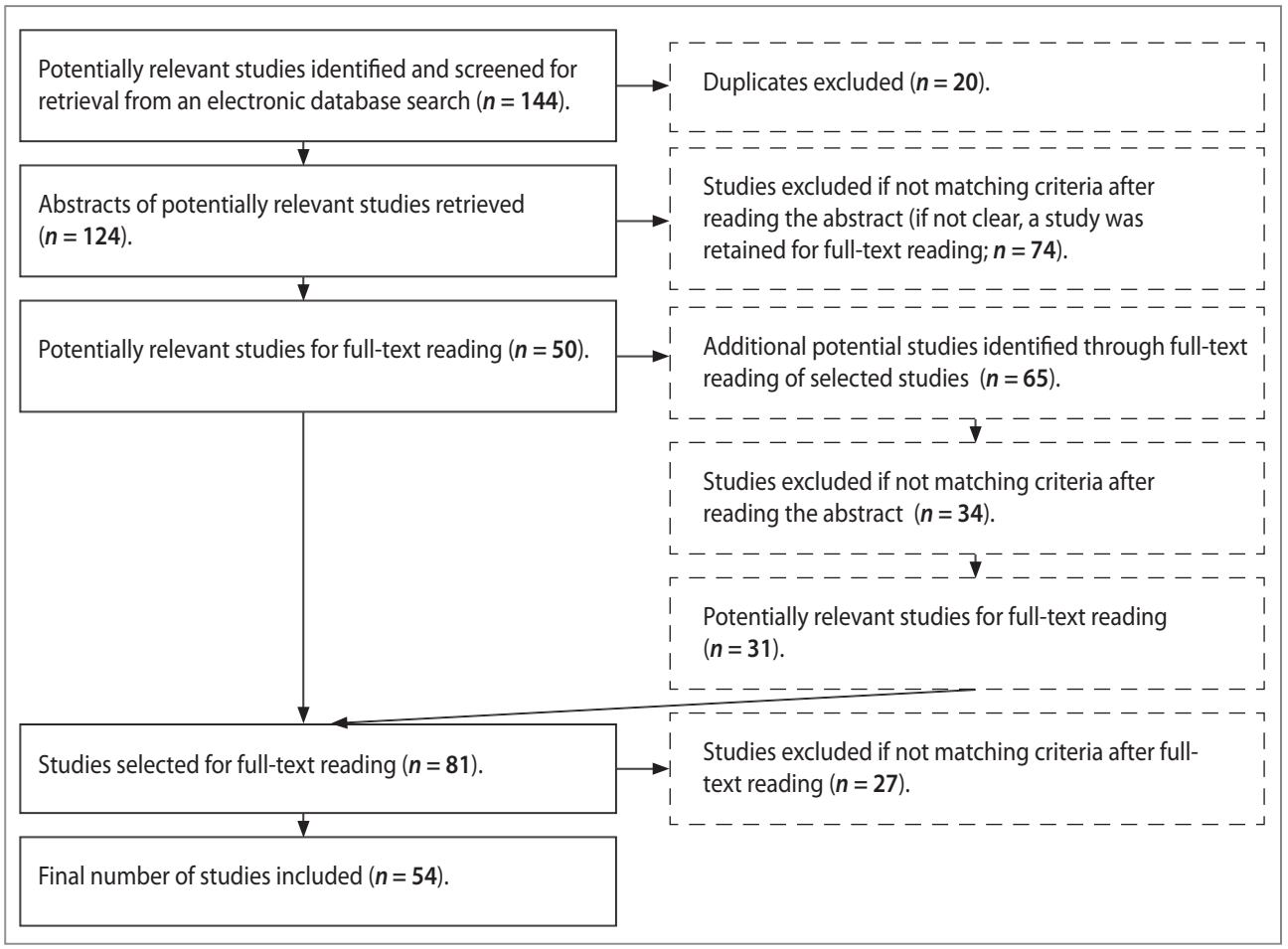

Figure 1: Flow diagram of selecting studies to include in the review.

Two specific research questions were formulated:

1. What kind of questionnaires are employed in residential satisfaction research? Do researchers use already existing scales, adapt them from some other study or questionnaire, or do they develop them for the studies in question?
2. What procedures have been employed to assess the psychometric properties (generalizability, internal structure, and external validity) of the questionnaires used?

2 Method

Following the research questions, inclusion and exclusion criteria were formed for the studies included in the review. For the study to be included, the following criteria had to be met:

- An empirical, quantitative study focusing on residential, housing, dwelling, and/or neighbourhood satisfaction (excluding community satisfaction);
- Main focus on at least one of the following levels of the residential environment: dwelling unit, building or building complex, or neighbourhood (excluding cities and wider regions);
- Focus on apartment buildings at the level of dwellings and buildings (excluding studies that explicitly focused on single-family homes and excluding student dormitories, retirement homes, etc.);
- Assessment through a self-report questionnaire;
- Assessment of residential satisfaction through multiple aspects of the residential environment (excluding studies with only general questions about satisfaction with the residential environment);
- Adult population, excluding psychiatric patients and students.

A search of potential studies for inclusion was performed through the University of Ljubljana's digital library database from 28 August to 8 September 2017. The disciplines selected for the search were architecture, psychology, and environmental sciences, which resulted in the following databases/content providers included: PsychINFO, J-STAGE, Scopus, Complementary Index, Academic Search Complete, Science Citation Index, Social Sciences Citation Index, Supplemental Index, MEDLINE, GreenFILE, ScienceDirect, JSTOR Journals,

ERIC, and PsychARTICLES. The search was limited to the following source types: academic journals, dissertations/theses, conference materials, eBooks, and reviews, with no limit on the publication date. The search terms included *residential satisfaction*, *housing satisfaction*, *dwelling satisfaction*, and *neighbourhood satisfaction* alone and in combination with the terms *scale*, *measurement*, and *questionnaire* in a Boolean/Phrase search mode. Additional studies were identified through full-text reading of selected articles, as indicated in the flow diagram of the study selection process (Figure 1).

The selection process resulted in fifty-four studies included in the review, with forty-seven original scales on residential satisfaction complying with the criteria presented. No studies were excluded based on the quality of the questionnaire employed or the study itself because one of the main points of this review is to present the most comprehensive picture possible of such questionnaires.

From the studies selected, the following data were extracted:

- Origin of the questionnaire used (already existing questionnaire, questionnaire developed for the study, questionnaire adapted from another questionnaire or system, etc.);
- Country where the study was carried out;
- Sample size;
- Level(s) of the residential environment;
- Number of items/aspects;
- Item form and scale type;
- Psychometric characteristics of the questionnaire reported and procedures employed (examination of the internal structure of the questionnaire, reliability of the questionnaire and its subscales, validation procedures).

3 Results and discussion

The fifty-four studies included in the review (see Table 1) employed forty-seven different scales or questionnaires on residential satisfaction. The number of questionnaires reviewed is not the same as the number of studies included because the main purpose of this review was to evaluate all available studies on residential satisfaction and the questionnaires they employed that complied with the selected criteria. This decision is further supported by the fact that the process of questionnaire validation is lengthy (John & Soto, 2009), often reported in more than one study. As noted in Table 1, despite our best effort, some of the studies were not available, and therefore the list of studies included is not perfect, but we conclude that it is sufficient to represent the general state of research practice in this field.

3.1 Questionnaires in residential satisfaction research

Following the first research question, we examined the type of questionnaires employed in the studies reviewed. Most of the studies (n = 19; see Table 1) did not report where the questionnaire selected for the study originated; that is, there was no reference for the questionnaire employed, nor was information on the development of the questionnaire provided. The second-largest category (n = 18) of studies in this regard consisted of questionnaires developed specifically for the study in question. A smaller number of studies employed already existing scales (n = 8) or adapted them from some other study, questionnaire, or system (n = 9). Most of the questionnaires were employed in only one of the studies reviewed, except for the following five cases: 1) the Scale of habitability used by Phillips et al. (2005) and by Fernández-Portero et al. (2017), 2) the questionnaire used by Jansen (2013, 2014), 3) the questionnaire used by Leslie and Cerin (2008) and by Lee et al. (2017), 4) the questionnaire used by Kellekci and Berkoz (2006) and by Berkoz et al. (2009), where we assume that the same data set was employed in both studies, and 5) the questionnaire used by Ibem and Aduwo (2013) and by Ibem and Amole (2013a, 2013b, 2014), where there is no reference for the questionnaire employed in any of the studies, but we assumed that the same scale or a slight variation of it was employed in all four of them based on the reported questionnaire items and characteristics of the questionnaire.

The first thing to note about the studies reviewed is the lack of sufficient reporting on the questionnaires used. For nineteen studies, there was no clear information on the origin of the questionnaire, and therefore very limited information was available to the reader regarding the questionnaire characteristics and development, which are needed for making informed judgements about the quality of the questionnaire employed, the study methodology, and the general quality of the study implications.

The next interesting observation is that, in eighteen out of fifty-four studies, the authors decided to develop a questionnaire for the study in question, usually with very limited reporting on the rationale for making this kind of decision and on the development of the questionnaire, which supports the observation by Adriaanse (2007), who found that residential satisfaction research is often based on lists of characteristics of the residential environment that are arbitrarily defined by the researcher. Although the development of a new questionnaire for a specific study is not incorrect per se, the question arises about the rationality of this decision. In general, the develop-

Table 1: Characteristics of questionnaires included in the review.

Questionnaire number	Study reference	Questionnaire name	Origin of questionnaire	Country of study	Sample size	Level of residential environment	Number of items/aspects[1]	Item form	Response scale
			1 = already existing scale; 2 = developed in/for this study; 3 = adapted from other study/ questionnaire/system; 4 = not reported			1 = dwelling unit/ apartment; 2 = building; 3 = neighbourhood		0 = not reported; 1 = list of aspects; 2 = sentence-like form	
1	Ukoha & Beamish, 1996		2	Nigeria	1,089	1, 2, 3	35	1	5 pt. Likert
2	Liu, 1999		2	Hongkong	212	1, 2, 3	30	1	5 pt.
3	Phillips et al., 2005[2]	Scale of habitability	2	Hongkong	518	1, 2, 3	18	1	5 pt.
	Fernández-Portero et al., 2017[2]		1 (Phillips et al., 2005; Siu & Wong, 2001[0]; Loo, 2000[0])	Spain	316		20		5 pt. Likert
4	Potter & Cantarero, 2006		2	Nebraska, USA	100	1, 2, 3	15	2	5 pt. Likert
5	Mohit et al., 2010[3]		2	Malaysia	102	1, 2, 3	45	1	5 pt. Likert
6	Mohit & Nazyddah, 2011[3]		2	Malaysia	250	1, 2, 3	45	1	5 pt. Likert
7	Mohit & Azim, 2012		4	Maldives	100	1, 2, 3	46	1	5 pt. Likert
8	Jansen, 2013[4]		1 (House Buyers in Profile, Boumeester et al., 2008[0])	Netherlands	1,032	1, 2, 3	8	1	1–100
	Jansen, 2014[4]		1 (House Buyers in Profile, Boumeester et al., 2008[0])		1,047				
9	Ibem & Aduwo, 2013[5]		4	Nigeria	452	1, 2, 3	27	1	5 pt. Likert
	Ibem & Amole, 2013a[5]		2		156				
	Ibem & Amole, 2014[5]		4		452				
	Ibem & Amole, 2013b5		4		452		31		
10	Dinç et al., 2014		2	Turkey	80	1, 2, 3	45	1	5 pt. Likert
11	McGirr et al., 2015		4	Canada	292	1, 2, 3	16	1	5 pt. Likert
12	Mohit & Adel Mahfoud, 2015		2	Malaysia	216	1, 2, 3	54	1	5 pt. Likert
13	Mridha, 2015		2	Bangladesh	204	1, 2, 3	65	1	Likert
14	Pekkonen & Haverinen-Shaughnessy, 2015		2	Finland	1,308	1, 2, 3	7	0	[–]
15	Zhang & Lu, 2016		4	China	184	1, 2, 3	20	1	5 pt.
16	Schwirian & Schwirian, 1993		3 (Ahlbrandt, 1984[0]; Bohland & Herbert, 1983[0])	Ohio, USA	254	1, 3	16	2	[–]
17	Adriaanse, 2007[6]	Residential environmental satisfaction scale (RESS)	3 (The Housing Demand Survey; no reference)	Netherlands	75,034	1, 3	16	2	5 pt. Likert
18	Adriaanse, 2007[6]	Residential environmental satisfaction scale (RESS), abbreviated version	3 (The Housing Demand Survey; no reference)	Netherlands	75,034	1, 3	8	2	5 pt. Likert
19	Li & Song, 2009		4	China	1,200	1, 3	21	1	5 pt.
20	Rioux & Werner, 2011		2	France	103	1, 3	18	2	5 pt.
21	Buys & Miller, 2012		4	Australia	636	1, 3	107	1	5 pt. Likert
22	Huang & Du, 2015		4	China	476	1, 3	12	1	5 pt. + categorical answers
23	Makinde, 2015		3 (Ikorodu Low-Cost Residential Housing Estate evaluations elements; no reference)	Nigeria	122	1, 3	38	1	5 pt. Likert

Questiooaire number	Study reference	Questionnaire name	Origin of questionnaire	Country of study	Sample size	Level of residential environment	Number of items/aspects[1]	Item form	Response scale
			1 = already existing scale; 2 = developed in/for this study; 3 = adapted from other study/ questionnaire/system; 4 = not reported			1 = dwelling unit/ apartment; 2 = building; 3 = neighbourhood		0 = not reported; 1 = list of aspects; 2 = sentence-like form	
24	Afacan & Demirkan, 2016		2	Turkey	240	1, 2	23	1	7 pt. Likert
25	Xue, Mak, & Ai, 2016		2	Hongkong	482	1, 2	15 (+ 3 on higher level)	1	5 pt.
26	Fleury-Bahi et al., 2008		4	France	257	2, 3	18	1	4 pt.
27	Muhammad et al., 2010		2	Malaysia	638	2, 3	37	1	5 pt. Likert
28	Erdogan et al., 2007		3 (Bardo in Dokmeci, 1992[0])	Turkey	264	2, 3	35	2	5 pt.
29	Barmark, 2015		2	Sweden	1,131	1	5	2	5 pt.
30	Bonaiuto et al., 1999	Perceived residential environmental quality (PREQ)	1 (Bonnes et al., 1997[0])	Italy	497	3	101	2	4 pt.
31	Sirgy & Cornwell, 2002		4	West Virginia, USA	380	3	[not reported]	0	7 pt.
32	Bonaiuto et al., 2004	Residential satisfaction scale	1 (Bonnes et al., 1991[0]; Bonnes et al., 1990[0])	Italy	152	3	38	2	4 pt.
33	Ge & Hokao, 2004[7]		4 (Hierarchical multi-attribute index system for residential satisfaction; no reference)	Japan	1,882	3	44	1	5 pt.
34	Ge & Hokao, 2006[7]		3 (Ge & Hokao, 2004)	Japan	1,503	3	36 / 30[8]	0	5 pt.
35	Xiaoyu et al., 2007[7]		3 (Ge & Hokao, 2004)	China	818	3	49	0	5 pt.
36	Kearney, 2006		3 (interview from Kearney & Kaplan, 1997[0])	Washington, USA	216	3	26	2	5 pt. Likert
37	Kellekci & Berkoz, 2006[9,10]		2	Turkey	401	3	18	2	[–]
	Berkoz et al., 2009[9,10]		1 (Kellekci & Berkoz, 2006)		401				
38	Hur & Morrow-Jones, 2008		4	Ohio, USA	2,060	3	15	2	7 pt. Likert
39	Leslie & Cerin, 2008[11]		1 (reference not reported)	Australia	2,194	3	17	1	5 pt.
	Lee et al., 2017[11]		3 (Leslie & Cerin, 2008)	USA	1,726				
40	Oshio & Urakawa, 2012		4	Japan	8,139	3	3	2	5 pt.
41	Salleh & Badarulzaman, 2012		4	Malaysia	100	3	19	1	5 pt. Likert
42	Van Herzene & De Vries, 2012		4	Belgium	190	3	8	2	5 pt.
43	McCrea et al., 2014		4	Australia	675	3	20	1	5 pt. Likert
44	Afacan, 2015		2	Turkey	200	3	28	1	5 pt.
45	Hadavi & Kaplan, 2016		1 (Hadavi, 2015[0])	Philadelphia, USA	434	3	17	1	5 pt.
46	Yamada et al., 2016		4	Japan	327	3	9	1	5 pt.
47	Ibem et al., 2017		4	Nigeria	517	3	24	1	5 pt. Likert

Notes: [0]Full papers were not available to the authors of this review. [1]If the initial selection of items was reduced for the final form of the questionnaire and/or for the final analysis, the number of the final selection is presented. [2]The same questionnaire is reported, but characteristics of the questionnaires differ. [3,5]The questionnaire employed is probably the same based on the characteristics reported, but there is no direct reference. [4,9]The same questionnaire is used. [6]Both the scale and its abbreviated version are reported in the same study. [7]The same questionnaire base is used, but reported characteristics of the questionnaires differ. [8]Thirty-six aspects were included in the Saga City study and thirty in the Kitakyushu City study. [10]Given the results reported in the paper, we assume that the data set was the same for both studies. [11]The same questionnaire is used, but psychometric analyses differ.

Table 2: Internal structure, reliability, and validity procedures of the questionnaires reviewed.

Questionnaire number	Study reference	Questionnaire name	Assessment of internal structure	Dimensions of the questionnaire based on the analysis of internal structure	Reliability coefficient(s)			External validity procedures
			0 = no / not reported; 1 = yes, type of analysis employed[1]	0 = no / not reported	For dimensions included	Coefficient	For the whole scale	0 = no / not reported; 1 = yes
1	Ukoha & Beamish, 1996		0	0	0	0	0	1
2	Liu, 1999		1 (PCA)	1. management and maintenance of estate; 2. lighting and ventilation; 3. convenience of location; 4. appearance of building; 5. surroundings; 6. spatial movement; 7. fire service installation; 8. appropriateness of site including privacy; 9. building materials used	0	0	0	0
3	Phillips et al., 2005	Scale of habitability	1 (PCA)	1. Interior environment; 2. exterior environment; 3. security concerns	1. α = 0.78 2. α = 0.76 3. α = 0.72	Cronbach's α	0	1
	Fernández-Portero et al., 2017		1 (EFA)	1. internal habitability; 2. external habitability	0		α = 0.87	
4	Potter & Cantarero, 2006		0	0	0	Cronbach's α	α = 0.89	0
7	Mohit & Azim, 2012		0	0	0	0	0	1
9	Ibem & Aduwo, 2013		1 (PCA)	1. neighbourhood facilities; 2. management of housing estates; 3. size of dwelling units; 4. type and location of residence in estate; 5. housing services; 6. housing unit characteristics; 7. social environment	0	Cronbach's α	α = 0.89	0
	Ibem & Amole, 2013a			1. location of housing estates; 2. management of housing estates; 3. size of residence; 4. type and location of residence in estate; 5. housing services; 6. housing unit characteristics; 7. social environment	1. α = 0.85 2. α = 0.80 3. α = 0.80 4. α = 0.71 5. α = 0.74 6. α = 0.71 7. α = 0.72		0	1
	Ibem & Amole, 2013b			1. lighting, ventilation, and size of housing units; 2. neighbourhood facilities; 3. management of housing estate; 4. safety and security of residence; 5. housing services; 6. privacy and thermal comfort	0	0	0	1
	Ibem & Amole, 2014		1 (EFA)	1. location of housing estates; 2. management of housing estates; 3. size of residence; 4. type and location of residence in estate; 5. housing services; 6. housing unit characteristics; 7. social environment	(for individual items, not scales based on EFA)	Cronbach's α	0	0
10	Dinç et al., 2014		1 (inter-sub-scale correlations)	1. distances; 2. characteristics of complex; 3. management; 4. flat, functional; 5. flat, constructional	1. α = 0.74 2. α = 0.85 3. α = 0.83 4. α = 0.88 5. α = 0.86	Cronbach's α	0	1
12	Mohit & Adel Mahfoud, 2015		0	0	0	0	0	1
13	Mridha, 2015		1 (PCA)	1. management and maintenance; 2. architectural features; 3. neighbourhood; 4. neighbours; 5. recreational facilities; 6. ambient environment	0	0	0	1
16	Schwirian & Schwirian, 1993		0	0	0	Cronbach's α	α = 0.77	0
17	Adriaanse, 2007	Residential environmental satisfaction scale (RESS)	1 (PCA)	1. internal neighbourhood reputation; 2. social climate; 3. dwelling satisfaction	1. α = 0.82 2. α = 0.75 3. α = 0.68	Cronbach's α	α = 0.86	1

Questionnaire number	Study reference	Questionnaire name	Assessment of internal structure	Dimensions of the questionnaire based on the analysis of internal structure	Reliability coefficient(s)			External validity procedures
			0 = no / not reported; 1 = yes, type of analysis employed[1]	0 = no / not reported	For dimensions included	Coefficient	For the whole scale	0 = no / not reported; 1 = yes
188	Adriaanse, 2007	Residential environmental satisfaction scale (RESS) – abbreviated version	1 (PCA)	(one unnamed factor)	0	0	0	1
20	Rioux & Werner, 2011		1 (PCA)	1. local area satisfaction; 2. satisfaction with access to services in local area; 3. satisfaction with relationships with neighbours, 4. home satisfaction	1. α = 0.81 2. α = 0.79 3. α = 0.85 4. α = 0.86	Cronbach's α	0	0
21	Buys & Miller, 2012		0	0	0	0	0	1
22	Huang & Du, 2015		1 (AGK)	1. neighbourhood characteristics; 2. public facilities; 3. housing characteristics	0	0	0	1
25	Xue et al., 2016		0	1. air quality and thermal comfort; 2. luminous comfort; 3. acoustic comfort	1. α = 0.77 2. α = 0.86 3. α = 0.71	Cronbach's α	0	1
26	Fleury-Bahi et al., 2008		1 (PCA)	1. social image of the neighbourhood; 2. services; 3. green areas; 4. social relationships	1. α = 0.83 2. α = 0.65 3. α = 0.61 4. α = 0.60	Cronbach's α	α = 0.79	0
27	Muhammad et al., 2010		1 (PCA)	1. housing characteristics; 2. public infrastructure; 3. neighbourhood characteristics; 4. transportation and communication services; 5. solid waste disposal service; 6. environmental protection; 7. public health service; 8. safety	1. α = 0.92 2. α = 0.95 3. α = 0.94 4. α = 0.83 5. α = 0.84 6. α = 0.85 7. α = 0.85 8. α = 0.96	(coefficient name not reported)	0	0
29	Barmark, 2015		1 (PCA)	1. housing satisfaction	1. α = 0.83	Cronbach's α	0	0
30	Bonaiuto et al., 1999	Perceived residential environmental quality (PREQ)	1 (AGK)	1. architectonic and town-planning space; 2. social relations features; 3. punctual and non-punctual (in-network services); 4. context features	(for components within the lower level than showed in the table)	Cronbach's α	0	0
31	Sirgy & Cornwell, 2002		0	0	0	0	0	1
32	Bonaiuto et al., 2004	Residential satisfaction scale	1 (PCA)	1. building/population density and uninhabitability; 2. socio-spatial insecurity; 3. functional inadequacy/unavailability	0	0	0	0
33	Ge & Hokao, 2004		1 (PCA)	1. convenience (1.1 convenience with living facilities; 1.2 convenience with access to working and studying; 1.3 convenience with access to nearby cities); 2. amenity (2.1 amenity with natural living; 2.2 environment; 2.3 amenity with landscape); 3. health (3.1 health with sanitary conditions; 3.2 health with no pollution); 4. safety (4.1 residential safety); 5. community (5.1 residential community)	0	0	0	1
34	Ge & Hokao, 2006		1 (PCA)	1. safety; 2. healthy; 3. comfort; 4. convenience; 5. community	0	0	0	0
36	Kearney, 2006		1 (PCA)	1. sense of community; 2. satisfaction with shared outdoor space; 3. satisfaction with nearby nature; 4. concern about local density; 5. concern about regional density	1. α = 0.87 2. α = 0.76 3. α = 0.79 4. α = 0.93 5. α = 0.80	Cronbach's α	0	0

Questionnaire number	Study reference	Questionnaire name	Assessment of internal structure	Dimensions of the questionnaire based on the analysis of internal structure	Reliability coefficient(s)			External validity procedures
			0 = no / not reported; 1 = yes, type of analysis employed[1]	0 = no / not reported	For dimensions included	Coefficient	For the whole scale	0 = no / not reported; 1 = yes
37	Berkoz et al., 2009 Kellekci & Berkoz, 2006		1 (PCA)	1. satisfaction with recreational areas; 2. satisfaction with centrality; 3. satisfaction with social structure and physical structure; 4. features of settlement; 5. satisfaction with transportation and accessibility; 6. satisfaction with social facilities	0	0	0	0
38	Hur & Morrow-Jones, 2008		0	0	0	0	0	1
39	Lee et al., 2017		0	0	test-retest ICC for individual items on separate sample (ICC's > .70 for 16 of 17 items)	Cronbach's α	α = 0.86	0
	Leslie & Cerin, 2008		1 (PCA)	1. safety and walkability; 2. access to destinations; social network; 4. travel network;	0	0	0	0
40	Oshio & Urakawa, 2012		0	0	0	0	0	1
42	Van Herzene & De Vries, 2012		1 (PCA)	1. neighbourhood qualities; 2. social cohesion	0	0	0	0
43	McCrea et al., 2014		0	0	0	0	0	1
44	Afacan, 2015		1 (FA)	1. physical dimension; 2. interaction with other residents of neighbourhood; 3. feeling a sense of belonging and comfort with neighbourhood; 4. maintenance dimension	0	Cronbach's α	α = 0.87	0
45	Hadavi & Kaplan, 2016		1 (PCA)	1. amount of affordances; 2. amount of green features; 3. amount of public space; 4. neighbourhood comfort	1. α = 0.84 2. α = 0.77 3. α = 0.88 4. α = 0.76	Cronbach's α	0	0
47	Ibem et al., 2017		1 (EFA)	1. services and infrastructure; 2. socioeconomic environment; 3. security; 4. noise and privacy	1. α = 0.90 2. α = 0.71 3. α = 0.71 4. α = 0.71	Cronbach's α	0	0

Notes: This table contains information on questionnaires' internal structure, reliability, and validity reported in the studies reviewed, and therefore studies that did not provide any of this information are excluded from the table. [1]Analysis of internal structure of the questionnaire: EFA = exploratory factor analysis, FA = factor analysis (when not reported whether EFA or confirmatory factor analysis was employed), PCA = principal component analysis.

ment of a psychometrically sound questionnaire can take several years and require that many studies be conducted, which results in a questionnaire of known characteristics, based on which (among other things) judgements of the study's quality can be made. Although there is a lack of psychometrically sound questionnaires on residential satisfaction, if an ad hoc questionnaire is developed for each study, it is likely that the psychometric characteristics are not assessed thoroughly enough, therefore calling into question the implications of the studies conducted.

We then reviewed the questionnaires with regard to their elemental characteristics. Based on the content of items (rather than on the information reported by the authors of the studies), most of the questionnaires focused on satisfaction with the neighbourhood (n = 18) and slightly fewer on all three levels of the residential environment included in this review (dwelling unit, building, and neighbourhood; n = 16). Only a small number of questionnaires focused on the dwelling and neighbourhood level (n = 8), building and neighbourhood level (n = 3), dwelling and building level (n = 2), and dwelling level (n = 1), which contradicts previous studies that found the majority of research to be focused only on one of the levels of the residential environment (e.g., Buys & Miller, 2012), but is in line with the observation by Aigbavboa and Thwala (2016) that the neighbourhood level is most focused on when studying residential satisfaction.

The questionnaires reviewed included from three to 107 aspects of the residential environment, with an average of 28.6 aspects. These aspects were presented in two forms of items – namely, lists of aspects (n = 29) and sentence-like items (n = 14) – and the item form was not reported for four questionnaires (nor were the items themselves). For most questionnaires, respondents indicated their opinions on a five-point Likert scale (n = 21).

3.2 Procedures employed to assess psychometric properties of the questionnaires

In the theoretical model of scale development proposed by Loevinger (1957) and elaborated by Clark and Watson (1995), three components of construct validity are important: substantive and structural validity, which together refer to the measure's internal validity, and external validity. Substantive validity focuses on the critical point in the development of any scale because it refers to the theoretical conceptualization of what one wishes to measure and the development of items for potential inclusion in the measure, but it is not the primary focus of this review. Because several conceptualizations of residential satisfaction exist with different implications for measurement attached to them, and because the studies reviewed represented various forms and levels of detail that they include in reporting on the development of the questionnaire items from their conceptualizations, extensive separate review(s) are necessary to fully evaluate this process. Therefore, in the second part of the review process, we focused on structural validity with reliability and processes to understand the structure of the questionnaires, and on the external validity processes employed (see Table 2) because these also are the fundamental concepts that help evaluate the quality of measures (John & Soto, 2009).

3.2.1 Generalizability

Generalizability refers to the degree to which inferences from our observation can be made with regard to other items, samples, measures, and so on, which is one of the fundamental concerns of empirical science. Assessment of generalizability is needed in questionnaire validation because measurements for which evidence of generalizability can be provided are much more useful in comparison to those for which generalizations cannot be made (John & Soto, 2009). In this review, the majority of questionnaires (n = 30) fall into the latter category because no procedure for assessing reliability was reported in any of the studies reviewed.

The notion of generalizability includes traditionally examined concepts of both reliability and criterion validity, which are discussed later in this review. Reliability assessment plays an important role in the psychometric evaluation of a questionnaire because it refers to the consistency of a measurement procedure and its indices imply the extent to which the scores obtained by measurement are reproducible. The characteristics of a participant, testing situation, questionnaire, and experimenter can all introduce measurement error, and investigation of the reliability of the questionnaire offers insight into the amount of this error and provides cues for decisions about whether the amount of this error is still tolerable given the goals of the research. Following generalizability theory (John & Soto, 2009), we are concerned with reliability because of the desire to generalize from one observation to some other class of observations, be it to other items (within the questionnaire), occasions (e.g., satisfaction with a neighbourhood at two points in time), or raters (e.g., when assessing how similar the importance ratings are for various aspects of the environment across residents). It can be argued that, for any questionnaire included in this review, at least one of these aspects would be of interest to researchers and readers.

Depending on the kind of observation we want to generalize, three types of procedures and study designs are typical: internal consistency procedures (items), re-test designs (occasions), and interrater agreement designs (raters; John & Soto, 2009). Among the questionnaires for which procedures of assessing reliability were employed (seventeen questionnaires in twenty studies), the most prominently reported coefficient used was (only) Cronbach's alpha (n = 78). One study also reported test-retest reliability along with Cronbach's alpha value, and another study reported only the value but not the type of coefficient employed. In general, researchers were concerned with generalizability across items because Cronbach's alpha is the most widely used coefficient of internal consistency (John & Soto, 2009; Bonnet & Wright, 2015; Cho & Kim, 2015). For only one questionnaire (Lee et al., 2017), researchers additionally reported correlations between participants' scores at two points in time, expanding the focus of reliability assessment to occasions, and therefore potentially providing more evidence for the generalizability of the inferences based on the measure in question.

Because Cronbach's alpha was the procedure of choice employed in the studies reviewed, it is important to note that Cronbach's alpha should not be an automatic choice. It is an accurate measure of reliability when the test items are approximately essentially tau-equivalent, which implies that they measure a single factor, and when the error scores of the items are uncorrelated. Because the essential tau-equivalence in particular is rarely met in practice, it is recommended that this assumption be examined beforehand (Cortina, 1993; Cho & Kim, 2015), which was not (sufficiently) evident in the studies reviewed. Following general practice, the studies reported only

the sample value of Cronbach's alpha coefficient, which generally across the studies, with some exceptions, proved to be at the acceptable level of .80 or .90 (Nunnally & Bernstein, 1994; see Table 2). However, this is not, as suggested by Bonnet and Wright (2015), an entirely appropriate approach, especially for small samples (e.g., as in Potter & Cantarero, 2006; Rioux & Werner, 2011; Dinç et al., 2014; Ibem & Amole, 2013a) because "the sample value of Cronbach's alpha contains sampling error of unknown directions and unknown magnitude" (Bonnet & Wright, 2015: 4). They suggest that confidence intervals for the population value of Cronbach's alpha should also be reported, which is lacking in the studies reviewed.

3.2.2 Structural validity

For the studies reviewed, it is interesting to note that some of the authors (Schwirian & Schwirian, 1993; Potter & Cantarero, 2006; Xue et al., 2016; Lee et al., 2017) report coefficients of internal consistency but do not make reported attempts to assess the dimensionality of a measure. These are important because coefficient alpha does not allow inferences on the dimensionality of a measure (John & Soto, 2009), even though it might be conceived as though it could. If a test demonstrates an acceptable level of alpha, then the error associated with the use of different items is relatively small. However, all that can be inferred from this information is that the test measures something consistently, but exactly what it measures is still unknown, and therefore to form a meaning of a measure some form of construct validation is necessary (Cortina, 1993), which also includes assessing the internal structure of a test (Furr & Bacharach, 2013).

The internal structure of a test is a case of structural validity that requires evidence about the structure of the items being consistent with the hypothesized internal structure (John & Soto, 2009). It refers to the dimensionality of a questionnaire; that is, whether the questionnaire is intended to measure one or more physical or psychological attribute(s) of an object or person (Furr & Bacharach, 2013). The understanding of the type of questionnaire being developed or used in terms of its dimensionality is of utmost importance because different types of tests have different properties, which have important implications for scoring, evaluation, and use regarding the implications they provide. To evaluate a questionnaire's internal structure, a variety of statistical procedures are available (e.g., factor analysis, cluster analysis, multidimensional scaling; Furr & Bacharach, 2013). Among the questionnaires reviewed (see Table 2), for only less than half of them (n = 23 reported in twenty-five studies) some procedure for assessing the internal structure was reported in at least one of the studies. For most questionnaires (n = 20), principal component analysis was conducted, and other methods were less prominent: exploratory factor analysis (n = 3) and not-further-specified factor analysis (n = 1). The findings of the procedures carried out to assess the internal structure of the questionnaires reviewed are beyond the scope of this review, but attention needs to be drawn to the fact that for twenty-four questionnaires reviewed there was no report of internal structure assessment procedures in any of the studies included (n = 25). Although in at least some of these studies the intended focus might have been to assess satisfaction with the specific, intentionally chosen attributes of the residential environment, with no intention to proceed to total scores representing residential satisfaction and some more complex analyses to add to the understanding of the data in question, this was not the case for many of them.

When analysing the internal structure of the questionnaire, some questions have to be addressed; for example, how many dimensions do test items reflect? If there is more than one, are they correlated with each other and what exactly are those dimensions, or, more specifically, what psychological, physical, or other kind of attributes do they correspond to? This is important because, if there is more than one dimension, each dimension might be assessed by a separate subscale requiring a separate psychometric analysis, the associations between them have implications for the meaning of a "total score" if calculated, and, finally, when it comes to interpretation, the score's meaning must be understood (Furr & Bacharach, 2013). Because many of the studies formed additive indices to represent satisfaction with the residential environment at selected level(s), it might also be wise to explore dimensionality, which could provide further guidance on how to make more informed decisions for the conclusions drawn from the analyses and in general help decrease the state of arbitrariness in which these additive measures are too often constructed, as already noted by Lu (1999) and Adriaanse (2007).

3.2.3 External validity

The external validity of a measure refers to the process usually understood as what validity is all about: it refers to evidence from the process of validating the measure relating to other measures and to non-test criteria in ways that would be theoretically expected. Some of the most common ways to assess external validity are through criterion correlation, where the question is whether measurement scores correlate with the criteria chosen (John & Soto, 2009). This was the method of choice in the nineteen studies (for seventeen questionnaires) that reported information on the validity procedures applied. The most common form of validation procedures reported was to predict or correlate general satisfaction with the chosen level of the residential environment from scores on individual dimensions or aspects included in the questionnaire. The most frequently used technique was linear regression (Uko-

ha & Beamish, 1996; Sirgy & Cornwell, 2002; Ge & Hokao, 2004; Phillips et al., 2005; Hur & Morrow-Jones, 2008; Mohit & Azim, 2012; Ibem & Amole, 2013a, 2013b; Dinç et al., 2014; Huang & Du, 2015; Mohit & Adel Mahfoud, 2015; Mridha, 2015; Xue et al., 2016), followed by examining correlation coefficients (Buys & Miller, 2012; Oshio & Urakawa, 2012; McCrea et al., 2014) and structural equation modelling (Fernández-Portero et al., 2017). An interesting procedure was reported by Adriaanse (2007): validating the RESS scale and its abbreviated version, in which the author assessed whether the score on residential satisfaction scale was in an anticipated relation to a participant's neighbourhood.

The structural and external validity of any measurement procedure are only two directions to be explored in the validation process, and the decision to limit the scope of this review to these two directions was guided by the studies reviewed and the reports they made on the efforts put into validating the questionnaires. The classic definition of validity refers to the degree to which a test measures what it is supposed to measure and includes construct, criterion, and content validity, whereas the more contemporary perspective reaches beyond this scope because it states that there must be underlying theory and empirical evidence supporting an interpretation of test scores (Furr & Bacharach, 2013). There is no single statistic that can be reported to prove that the measurement procedure is valid. Validation of any measurement is an ongoing process (John & Soto, 2009), which with every further step has the potential to provide more information and proof for the questionnaire at hand, and to show that its interpretations are worth trusting in specific situations and usage contexts.

4 Conclusion

After reviewing studies on residential satisfaction and questionnaires following the approach of measuring responses to multiple items on satisfaction with various aspects of the environment, it can be concluded that residential satisfaction is relatively frequently investigated through this approach, but in most cases too little thought and effort are put into developing and validating the questionnaires employed, at least inasmuch as can be observed from the information reported in the studies reviewed. Questionnaires or scales rely on measurement models that, like most models, are simplifications of the concept and situation investigated. "Although they should represent the best possible approximation of the phenomena of interest, we must expect them, like all 'working models,' to be eventually proven wrong and to be superseded by better models. For this reason, measurement models must be specified explicitly so that they can be evaluated, disconfirmed, and improved" (John & Soto, 2009: 462). However, as Clark and Watson (1995) observed, the complexity of these concepts is still not fully appreciated by researchers, and their statement also holds true for residential satisfaction. The lack of employing and reporting validation procedures is making assessment of the quality of studies that employ these questionnaires an overly taxing job. The lack of properly developed and psychometrically tested questionnaires might also contribute to the fact that researchers so often decide to form their own measures because there are not many readily available questionnaires for use in this research, as a result of which there is continued inadequacy in residential satisfaction questionnaires.

Based on this review, a few recommendations for increasing the quality of research on residential satisfaction can be made. First of all, researchers (and reviewers) should make sure to provide clear information about the questionnaires employed in all of the publications on the topic. This information should include the origin of the questionnaire and its basic characteristics (type of questionnaire, response scale, example of a questionnaire item, internal consistency coefficients, etc.). Even though there are not many readily available validated questionnaires on this topic, researchers should invest more effort in including questionnaires already developed. Where this is not possible and a questionnaire is still needed, development of a new questionnaire should be carefully planned. It should be based on thorough assessment of the theoretical foundation of the questionnaire, including an examination of the criteria and justifications for including specific aspects of the residential environment. Because these criteria and justifications are lacking in the field, this also represents an opportunity for more extensive research. Furthermore, when developing a new questionnaire, items should be carefully formulated, and then the generalizability and the structural and external validity of the questionnaire should be assessed. When this kind of process has taken place, an effort to publish it should be made for at least two reasons: first, to inform other researchers of the existence of a questionnaire that could potentially be helpful to them, and, second, to make empirical research employing the questionnaire in question more transparent. The same should be provided for translations of already existing questionnaires. With these recommendations in mind, in our opinion researchers can improve their work and make important contributions to studying residential satisfaction.

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Urban design factors involved in the aesthetic assessment of newly built environments and their incorporation into legislation: The case of Istanbul

Newly built environments in cities whose features have changed due to neoliberal policies and priorities have often been criticized for their lack of aesthetic qualities. This criticism has made the aesthetic assessment of such environments more important, raising two crucial questions: how such an assessment can be performed, and how it can be incorporated into legislation. This article focuses on both questions in the case of Istanbul by determining and ranking formal aesthetic factors using factor and ANOVA analyses of the results of a survey conducted with three different sampling groups (scholars, designers, and officials) in Istanbul in 2017. The results of the analyses show that scholars' views in evaluating urban formal aesthetics are different from those of officials and designers. In addition, the analyses reveal that "character and identity", "green design", and "incompatibility between identity and design" are three important factors affecting urban formal aesthetics in newly built environments. These results are then followed by a discussion on how these factors can be incorporated into legislation in the case of Istanbul.

Keywords: aesthetic assessment, newly built environment, urban design factors, formal aesthetic parameters, Istanbul, Turkey

1 Introduction

Studies related to urban neoliberalism emphasize how neoliberal policies have led to the reconfiguration of spaces in cities the world over. Under such policies, "competitiveness" is considered indispensable to the economic prospects of a city (Karaman, 2013). Urban space has become one of the most profitable sources of investments, leading cities to adopt aggressive place-marketing strategies to attract capital (Swyngedouw et al., 2002; Kuyucu & Unsal, 2010). Large-scale (mega) projects, mass housing projects, and the construction of shopping malls, five-star hotels, and business centres began to shape urban environments (Kuyucu & Unsal, 2010; Özalp & Erkut, 2016). Newly built environments in cities whose features have been changed due to neoliberal policies and priorities have often been criticized for their lack of aesthetic qualities. This criticism has made discussions of urban aesthetics increasingly important, raising two crucial questions: how to perform aesthetic assessments of newly built environments, and how to incorporate such assessments into legislation. This article focuses on both questions in the case of Istanbul. Various studies in the literature have demonstrated that the aesthetic assessment of the built environment depends on both subjective and formal parameters (Strenberg, 1991; Nasar, 1994). This study, however, takes into consideration only formal aesthetic parameters, using urban design criteria that are more concrete and easily incorporated into legislation.

Istanbul is Turkey's most important economic, cultural, and tourism centre, occupying a strategic location between Asia and Europe. At the same time, Istanbul is a city world-famous for its natural beauty and monuments left over from its status as the capital city of the Roman, Byzantine, and Ottoman empires (Kuban & Yalçın, 2010). However, Istanbul has undergone radical and dramatic restructuring since the beginning of the 2000s under a neoliberal regime (Lovering & Turkmen, 2011; Karaman, 2013). This restructuring has been shaped by a construction boom that depends on the real estate and property markets (Balaban, 2012). Istanbul has thus been rapidly losing its unique nature (Barfu Candan & Ozbay, 2014). The neoliberal policies in force since the 2000s have physically enlarged the city and at the same time led to many new physical, social, environmental, and ecological problems, among which are squatter settlements (Tur. *gecekondu*), tall mass residential structures and mega projects and their integration into the city, transportation systems and traffic problems, infrastructure, and overcrowded areas. Naturally, Istanbul has also been harmed in terms of urban aesthetics. In particular, the construction boom has seriously damaged the formal aesthetics of the city, especially its skyline (Figure 1). Therefore, the factors affecting urban aesthetics in newly built environments in Istanbul need to be determined in order to inform policies that contribute to improving the city's formal aesthetics. This study can be useful for other cities facing the same construction dynamics.

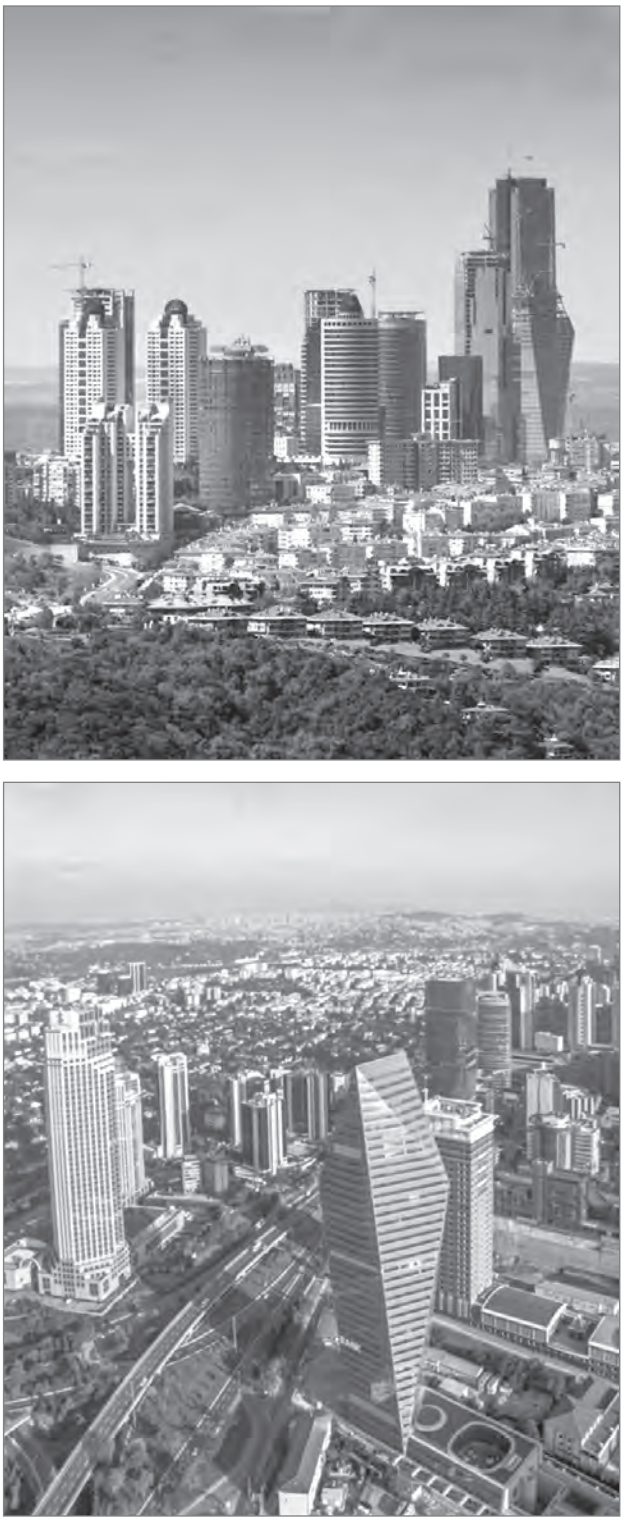

Figure 1: Construction boom in Istanbul (source: GYODER, 2015).

The following section is a review of the literature related to urban aesthetics. The third section of the paper focuses on the

aesthetic assessment of built environments. The fourth section examines the urban design factors involved in the aesthetic assessment of newly built environments and is divided into four subsections: the first subsection outlines the research design, the second includes data and sampling, the third contains the results of the study's analyses, and the fourth examines the urban design factors involved in the aesthetic assessment of newly built environments in existing legislation. The last full section is devoted to a general evaluation and conclusions.

2 Literature review: urban aesthetics

In literature, the definitions, research methodologies, and indicators related to urban aesthetics differ from one study to another, according to the research aim. Despite this diversity in conceptualization, there is a consensus that urban aesthetics is a multidimensional concept. As Teymur (1981: 81) has explained, "aesthetic" is a semantically ubiquitous term. It functions as an adjective to qualify other qualifying terms such as "quality", "dimension", "value", and so on. It is invariably a "positive" adjective. It implies "good", "beautiful", "nice", and not "bad" or "ugly" and so on. "Aesthetic" and "aesthetics" also refer to the appreciation or criticism of the beautiful, the philosophy or science of taste, or the perception of beauty (Norton, 1967; Teymur, 1981). Traditional definitions of aesthetics refer to the perception of beauty in the arts and may imply extreme and intense feelings such as the sublime (Nasar, 1997: 152).

The urban aesthetic is a subjective consideration beyond quantification (Sternberg, 1991: 70). Pehlivanoğlu (2011: 1) describes urban aesthetics as a complex subject that needs to go beyond the evaluation of a city's physical characteristics and requires the consideration of individuals' experiences as a significant part of urban quality. Although some in the literature consider structure and meaning the basis of urban aesthetics, others also take into account the contributions of natural setting, land use, traffic and pedestrian flows, the built form, and people's behavioural patterns. In brief, the defined relationships between buildings and the environment, well-structured spatial transitions, and harmony determine the nature of urban aesthetics (Erdoğan, 2006: 72; Xiangzhan, 2008: 63; Mowla, 2011: 169). These parameters have helped planners understand the multidimensional nature of urban aesthetics.

There are various approaches to the evaluation of aesthetics in urban areas. For example, Nasar (1994: 382) distinguishes between the formal and symbolic aesthetics of a city. The former includes parameters such as shape, proportion, rhythm, scale, complexity, colour, illumination, shadowing, and hierarchy, which describe the physical characteristics of buildings. Symbolic aesthetics is defined by parameters such as the human experience of building exteriors through mediating content variables that are not defined solely by physical attributes. In some studies, urban aesthetic concerns are divided into two spheres: architectural values and urban aesthetics (King, 1997). Whereas architectural aesthetics has more to do with the physical qualities of buildings and the space around them, urban aesthetics comprises a much wider range of values, conditions, and criteria, such as economics, traffic, and pollution. These phenomena, while not necessarily visual, have an impact on how one perceives the city and they play an important role in aesthetic perceptions. Also among these issues are the cultural and social values that a society or community brings to the urban area (King, 1997). According to Onaran (1995: 24), people's aesthetic experience of their surroundings cannot be independent from the meaning they attribute to and the attachments they form with the surrounding environment. Aesthetic substance thus depends on the concepts of the "aesthetic subject", "aesthetic object", and "aesthetic value". The aesthetic object refers to the natural setting, space and mass, surface, and skyline of a city. The dimension, form, location, and distance and direction relations between objects influence the aesthetic values of an urban space (Pehlivanoğlu, 2011: 11). The aesthetic subject is defined as a matter of taste in environmental aesthetics. Similarly, Nasar (1990) describes the evaluation of the urban environmental image as depending on a person's biology, personality, sociocultural experience, adaptation levels, goals, and expectations. Because people are unique, with different senses, needs, and requirements that give shape, meaning, and function to a place, their identification with and perception of a place are also different. Another study has argued that the investigation of urban aesthetics takes place at four levels (Alcock, 1993, cited in Pehlivanoğlu, 2011: 17): aesthetics of proportion, aesthetics of the plan, artistic aesthetics, and social aesthetics. Here, the aesthetics of proportion refers to the reaction of viewers to visual stimuli of high aesthetic quality, the aesthetics of the plan is related to the objective value of the geometrical arrangements of forms such as geometrical hierarchies, artistic aesthetics involves the expression of ideas in an abstract way with the help of urban design, and social aesthetics is concerned with the subjective experience of space (Pehlivanoğlu, 2011: 17).

Urban aesthetics is a multidimensional and complex subject that can be evaluated both formally and symbolically, requiring assessments of individuals' experience, behaviour patterns, and subjective consideration and meaning at the same time as those of physical characteristics, natural setting, land-use, circulation systems, and built forms. Because the aim of this study is to examine urban aesthetics in a way that can be incorporated into urban laws and regulations, only the formal aesthetic parameters are taken into consideration because legislation requires the inclusion of more concrete parameters.

Therefore, aesthetic considerations such as matters of taste in environmental aesthetics, biology, personality, adaptation levels, goals, expectations, and the social, economic, and cultural circumstances and values that a society brings to the urban area, none of which are defined solely by physical attributes, are excluded from the scope of this study.

3 Aesthetic assessment of built environments

Studies on the aesthetic assessment of built environments are quite limited in the literature. Although the aims of most of these studies are almost similar, the methodologies through which they attempt to quantify urban aesthetics vary greatly.

There are some perception-based studies concerning the measurement of the aesthetic quality of the built environment (Strenberg, 1991; Pehlivanoğlu, 2011; Gomeshi & Mohd Jusan, 2013; Ahmad Nia et al., 2017; Gjerde, 2017). For example, Ahmad Nia et al. (2017) evaluated the aesthetic characteristics of urban spaces from a morphological point of view. In this study, urban aesthetics was quantified through a consideration of the chronological development of urban expansion through a city's history. The study selected four neighbourhoods from different periods of urban growth in a city, using both subjective and physical parameters in evaluating urban aesthetics. According to this research, people's perception of the aesthetics of an urban environment changes along with their aesthetic values and characteristics. Another study (Gjerde, 2017) evaluated the visual aesthetic perceptions of urban streetscapes using surveys conducted with the public and design and planning professionals. Gomeshi et al. (2013) investigated the different aesthetic preferences of architects and non-architects in residential facade designs. Pehlivanoğlu (2011) evaluated perceptions related to the aesthetics of urban public space by considering the relationship between the aesthetic subject, object, and value.

Some studies related to urban aesthetics have focused on the aesthetics of the urban landscape. Sahraoui et al. (2016) examined aesthetic judgements of landscapes using a set of landscape visibility metrics as spatial data in their survey research. In another study (Chen et al., 2009), the aesthetic quality of an urban green space was evaluated using quantitative holistic evaluation techniques. Cats-Baril and Gibson (1987) evaluated landscape aesthetics using design experts.

There are other studies of urban aesthetics based on different perspectives. For example, Çelik and Açıksöz (2017) examined how sustainability in urban aesthetics can be ensured using urban design guidelines. Crippen (2016) and Madanipour (1996) examined urban aesthetics from the perspective of the political aspects of urban design. Mokhtar (2007)'s study criticized the unaesthetic monotony of modern environments through a comparative study. Nasar (1997) evaluated new developments in aesthetics for urban design using historiometric inquiry and aesthetic programming methods. In another study, Dimitrovska Andrews and Butina Watson (2001) performed a critical analysis of successful urban design initiatives to promote high-quality urban design. For this purpose, they proposed basic principles of good urban form at three levels of planning and design: context and general compatibility (site, land use, setting / urban tissue characteristics, and scale), arrangement and external effects (the layout-related quality of the public realm, the quality of physical space, and landscaping), and architecture and detailed design (the most sensitive area of urban design: building types, style, facade/height details, and materials).

The literature review thus demonstrates that the aesthetic assessment of built environments is generally based on the perception and judgment of various aspects of the urban environment. Although aspects as wide-ranging as the aesthetics of residential facades, streetscapes, public space, landscapes, or urban green spaces have been evaluated, the aims of the studies are generally the same. In such studies, the methodologies comprise the selection of case studies, the setting of metric parameters, and the formation of design guidelines for evaluating aesthetic quality. Such studies have also employed public officials, design and planning professionals, architects, and ordinary people in their methodologies. As seen above, studies related to the aesthetic assessment of newly built environments that can provide input to legislation are limited.

4 Urban design factors in the aesthetic assessment of newly built environments

4.1 Research design

The research design of this study consists of two stages. In the first stage, the urban design factors involved in the aesthetic assessment of newly built environments are determined and ranked using factor analysis and ANOVA analyses. The second stage examines how these factors can be incorporated into legislation in the case of Istanbul.

Urban aesthetics is mainly related to the external image of an object and place in a given urban context, the position of buildings, and harmony and suitability in composition. The urban design principles used to increase the aesthetic qualities of the built environment have been defined in various ways by different sources (Porteous, 1996; Nasar, 1997; DETR,

2000; Taylor, 2009; Celik & Acıksoz, 2017). Among these principles are the urban design parameters of DETR (2000). These parameters have been defined as character ("a place with its own identity"), continuity and enclosure ("a place where public and private spaces are clearly distinguished"), quality of the public realm ("a place with attractive and successful outdoor areas"), ease of movement ("a place that is easy to get to and move through"), legibility ("a place that has a clear image and is easy to understand"), adaptability ("a place that can change easily"), and diversity ("a place with variety and choice"; DETR, 2000: 15). The parameters of this document are used as guidance for best practice and government. A questionnaire was thus prepared taking into consideration the urban design parameters of DETR, as well as the formal parameters obtained from the literature.

The research questionnaire was designed with thirty specific questions to help determine urban design factors in the aesthetic assessment of newly built environments. These questions were divided into three parts. They are presented in greater detail in Section 4.2. The results of the surveys were analysed using the SPSS software (Statistical Package for the Social Sciences) version 21. The collected survey data were added manually into the SPSS program. Then factor analysis was employed to determine these design factors with consideration paid to the relative importance of their components.

4.2 Sampling and the database

The evaluations of experts in urban design areas were required to determine the urban design factors involved in the aesthetic assessment of newly built environments because any parameters must be clearly defined. The terminology involved would not have been clear to the general public or laypeople. Therefore, three groups of experts were selected to participate in the study: scholars, officials, and various urban designers. All the selected participants have lived in Istanbul and are familiar with the situations of newly built environments in the city, especially after the 2000s. Because selecting the entire body of scholars, officials, and designers in fields related to urban design in Istanbul was impossible, a sample was taken to represent them.

Scholars were chosen from the architecture and design departments of universities in Istanbul. According to the Council of Higher Education site (2017), there are fifty universities with thirty-two departments of architecture, interior design, urban design and planning, and landscape architecture in the city. Sixty participants from 5% of the total department members were engaged as scholar participants.

The second participant group consisted of designers working in design bureaus. Registered design bureaus were selected to provide participants. According to the chambers of architects, planners, and landscape architects in October 2017 there were 102 city planning bureaus, 2,506 architectural design bureaus, and twenty-one landscape architecture bureaus. Thirty-seven participants from 10% of these offices were selected as designers.

The third participant group consisted of officials working in municipal governments. According to the Istanbul Metropolitan Municipality's site, in October 2017 there were thirty-nine district municipalities and one metropolitan municipality. Forty participants, one from each municipality, were selected as officials. The characteristics of all three participant groups are shown in Table 1.

The survey form consisted of two main sections. The first section of the survey included questions designed to determine the characteristics of the participant groups. The second and main section contained specific questions about urban formal aesthetics. Most of these questions were designed to elicit judgments concerning urban formal aesthetic parameters that could be defined solely by physical attributes. These questions were selected to define more specific formal design parameters on building, design, and planning scales to be included in legislation. This section consisted of three parts and contained questions at the building (design) scale (three-dimensional variables) and the planning scale (two-dimensional variables; see Figure 2). Participants were asked to indicate to what extent they agreed or disagreed with the statements in the survey. The coding of the five-point Likert scale for all questions was as follows: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree. Through this method, the urban design factors involved in the aesthetic assessment of newly built environments were determined in order of importance.

The first twelve questions of the second section concerned aesthetic parameters on building and design scales and three-dimensional design data, including questions about dimension, hierarchy, order, rhythm, proportion, ratio, scale, mass, bulk, architectural motif, solid and void ratio, facade design, form and interior design of buildings, colour, texture, pattern, and materials. Questions 13–18 concerned two- and three-dimensional formal design parameters at both the building (design) and planning scale, emphasizing the most prominent features of newly built environments in recent years, especially in the case of Istanbul: the effects of the predominance of tall buildings, disharmony between building heights, form relationships between buildings, diversity, and ecological landscape design. Questions 18 through 29 concerned planning-scale data, with

Table 1: Characteristics of participant groups.

Participant characteristics	Scholars (*n* = 60)	Designers (*n* = 37)	Officials (*n* = 40)	Total (*n* = 137)
Sex				
Female	42 (70%)	25 (66%)	24 (60%)	91 (34%)
Male	18 (30%)	12 (34%)	16 (40%)	46 (66%)
Age				
25–30	13 (22%)	10 (27%)	6 (15%)	29 (21%)
30–35	8 (13%)	16 (43%)	13 (33%)	37 (27%)
35–40	1 (1%)	1 (2%)	14 (35%)	16 (12%)
40–45	13 (22%)	5 (14%)	7 (17%)	25 (18%)
Over 45	25 (42%)	5 (14%)	0 (0%)	30 (22%)
Position				
Architects	38 (64%)	19 (51%)	21 (53%)	78 (57%)
Interior architects	6 (10%)	0 (0%)	0 (0%)	6 (4%)
Landscape architects	2 (3%)	2 (5%)	2 (5%)	6 (4%)
Urban planners	12 (20%)	15 (41%)	15 (37%)	42 (31%)
Urban designers	2 (3%)	1 (3%)	2 (5%)	5 (4%)
Monthly income				
TL 2,500–3,000	8 (14%)	3 (8%)	1 (3%)	12 (9%)
TL 3,500–4,500	8 (14%)	10 (27%)	1 (3%)	19 (14%)
TL 4,500–5,500	17 (28%)	12 (32%)	25 (62%)	54 (39%)
TL 5,500–6,500	10 (16%)	4 (11%)	10 (25%)	24 (18%)
Over TL 6,500	17 (28%)	8 (22%)	3 (7%)	28 (20%)

two-dimensional variables: plot area ratio, grid planning, compatibility between the parcel and surroundings, project-based developments, green design, circulation, and building orientations. The last variable of the survey was the relationship between urban identity and urban aesthetics (Figure 2).

4.3 Results of the analyses

In order to evaluate the reliability of the survey scale, a reliability analysis was performed using the SPSS software, which was developed to assess the reliability and authenticity of the tests, surveys, or scales used in measurements. The results of this test are expressed through Cronbach's alpha (α), which in the case of these thirty questions was 0.808. If $0.80 \leq \alpha \leq 1.00$, then the scale is a reliable measure at a high level (Kalayci, 2005: 405); the test thus indicated a high level of reliability for the survey.

The analysis of variance (ANOVA) revealed that the participants agreed with 87% of the questions. Table 2 shows the frequencies of parameters on agreeing or disagreeing from the participant responses. The means for each of the three groups for these parameters are shown on the right side of Table 2. ANOVA analysis determined that scholars evaluate urban formal aesthetics differently than officials and designers.

A factor analysis was performed using the SPSS program to determine which urban design factors are the most important in the aesthetic assessment of newly built environments. The aim of this analysis is to reduce the amount of data and to summarize and categorize related parameters in order to more easily interpret and understand relationships and patterns (Yong & Pearce, 2013: 79). The Kaiser–Meyer–Olkin Measure of Sampling Adequacy was used to test the suitability of research data for factor analysis. The results of the test, with a value of 0.772, determined that a factor analysis was useful with the given data.

According to the results of the factor analysis in Table 3:

- The first factor (F1) is labelled "character and identity" and accounts for 21.874% of the common variance. It generally indicates the physical features of buildings and comprises observational measurements of the character or identity of built environments.
- The second factor (F2) is labelled "green design" and accounts for 13.599% of the common variance. It generally indicates ecological features in planning and design, comprising planning scale measurements for ecological design.
- The third factor (F3) is labelled "incompatibility between identity and design" and accounts for 9.294% of

DEPENDENT VARIABLES					
Building and design scale (three-dimensional variables)		**Building (design) and planning scale** (two- and three-dimension variables)		**Planning scale** (two-dimensional variables)	
1	Dimension and continuity have a positive effect on the urban aesthetic	13	Predominance of tall buildings in the skyline has a negative effect on the urban aesthetic	19	The plot area ratio directly affects the urban aesthetic
2	Order and hierarchy have a positive effect on the urban aesthetic	14	Disharmony between building heights has a negative effect on the urban aesthetic	20	Grid plans have a positive effect on the urban aesthetic
3	Proportion, ratio, and rhythm have a positive effect on the urban aesthetic	15	Formal relationships between building groups have a positive effect on the urban aesthetic	21	Incompatibility between plot and surroundings identity has a negative effect on the urban aesthetic
4	Scale, mass, and bulk have a positive effect on the urban aesthetic	16	Uniform type of mass housing has a negative effect on the urban aesthetic	22	Incompatibility of project-based developments with detailed local plans has a negative effect on the urban aesthetic
5	Architectural motif repetition has a positive effect on the urban aesthetic	17	Diversity and visual wealth have a positive effect on the skyline	23	Green areas have a positive effect on the urban aesthetic
6	Solid and void ratio in the facade design has a positive effect on the urban aesthetic	18	Ecological landscape design has a positive effect on the urban aesthetic	24	Integration with the main pedestrian paths has a positive effect on the urban aesthetic
7	Facade-mass mismatch with local land-use plans has a negative effect on the urban aesthetic			25	Disharmony between building height and path width has a negative effect on the urban aesthetic
8	The incompatibility of form with structure has a negative effect on the urban aesthetic			26	Closed and isolated design has a negative effect on the urban aesthetic
9	Colour harmony between buildings has a positive effect on the urban aesthetic			27	Solid and void ratio between buildings has a positive effect on the urban aesthetic
10	Incompatibility of textures, patterns, and materials has a negative effect on the urban aesthetic			28	Lack of protection for the natural environment and ecosystem has a negative effect on the urban aesthetic
11	Building interior design has an effect on the urban aesthetic			29	The proper orientation of the buildings has a positive effect on the urban aesthetic
12	The use of ecological materials has a positive effect on the urban aesthetic			30	The creation of urban identity through urban aesthetics

Figure 2: Dependent variables: questions used in the survey.

the common variance. It generally indicates plot features in planning and design, and it comprises planning and building scale measurements in the built environment.

- The fourth factor (F4) is labelled "lack of protection for continuity and the natural environment" and accounts for 5.569% of the common variance. It generally indicates plot features in design and comprises planning scale measurements for the built environment.
- The fifth factor (F5) is labelled "tall buildings" and accounts for 5.235% of the common variance. It generally indicates the planning features in built environments.
- The sixth factor (F6) is labelled "plan-based versus project-based development" and accounts for 4.176% of the common variance. In Turkey, urban planning is practiced through a regulatory planning system. Although grid planning is often used, project-based developments outside of the existing planning system have increased, especially since 2000 (Ozkan & Turk, 2016). F6 generally indicates the planning features in built environments.
- The seventh factor (F7) is labelled "harmony between groups of buildings" and accounts for 3.942% of the common variance. It generally indicates planning features in built environments.
- The eighth and last factor (F8) is labelled "building interior design" and accounts for 3.857% of the common variance. It generally indicates the building features in built environments.

Table 2: Results of the analysis of variance.

Variables	Agree		Disagree		Means		
	n	%	*n*	%	Scholars	Officials	Designers
1	55	40.1	68	49.7	2.40	3.62	3.24
2	79	57.7	42	30.6	3.85	2.72	3.08
3	84	61.3	36	26.3	3.91	2.92	3.35
4	69	50.4	44	32.1	3.78	2.32	3.02
5	34	24.8	55	40.2	3.10	2.35	2.62
6	62	30.3	50	36.5	3.20	2.90	2.94
7	108	78.9	12	8.7	4.23	3.90	4.10
8	111	81.0	12	8.8	4.26	4.20	3.91
9	61	44.5	40	29.1	3.41	3.05	2.86
10	103	75.8	10	7.3	3.98	3.85	4.38
11	35	25.6	72	52.6	2.30	2.80	2.89
12	66	48.2	40	29.2	2.90	3.72	3.43
13	121	88.3	6	4.3	4.43	4.45	4.16
14	123	89.8	9	6.6	4.36	4.65	4.18
15	77	56.6	14	10.3	3.81	3.56	3.27
16	110	80.3	12	8.8	4.33	4.02	3.94
17	72	52.6	38	27.7	3.88	2.70	3.10
18	97	70.8	17	12.4	3.98	3.82	4.08
19	113	82.5	7	5.1	4.21	4.27	4.05
20	45	33.1	44	32.3	3.31	2.89	2.51
21	114	83.2	6	5.8	4.20	4.15	4.21
22	105	76.7	9	6.5	4.25	4.17	3.86
23	102	74.5	16	11.7	4.20	3.80	4.02
24	94	68.6	24	17.5	3.46	3.95	3.91
25	114	83.2	10	7.3	4.13	4.45	4.35
26	98	71.6	13	9.5	4.05	4.05	3.97
27	88	64.2	31	22.6	3.91	3.25	3.40
28	119	86.8	7	5.1	4.20	4.37	4.56
29	78	56.9	32	23.4	3.30	3.77	3.72
30	104	75.9	17	12.4	4.30	3.90	3.86

4.4 Urban design factors for aesthetic assessment of newly built environments in existing legislation

According to the results of the factor analysis, "character and identity" is the first and most important parameter that affects urban formal aesthetics. This factor is followed by the factors of green design, incompatibility between design and identity, lack of protection for continuity and the natural environment, tall buildings, plan-based versus project-based development, harmony between building groups, and building interior design. Whether these factors are present in the existing legislation is examined below.

Legislation related to aesthetic assessment can be divided into three levels in Turkey and Istanbul: the national level, the city/town level, and the local level (see Figure 3).

The articles related to urban design and aesthetics that concern land plots, paths, structures, and the skyline are summarized in Figure 4. The relationships between these laws and the eight determined factors are shown in Figure 5, which shows the laws and regulations containing provisions related to the eight factors. It also tries to show current legal approaches to the problems related to these factors.

A consideration of the legislation related to newly built environments along with a comparison of Figure 4 and Figure 5

Table 3: Factors and parameters.

Factor analysed	Factor content
F1: Character and identity	1. Proportion, ratio, rhythm
	2. Scale, mass, bulk
	3. Order, hierarchy
	4. Dimension and continuity
	5. Diversity and visual wealth
	6. Solid and void ratio in facade design
	7. Colour harmony
	8. Architectural motif
	9. Urban identity
F2: Green design	1. Ecological landscape design
	2. Integration with the main pedestrian path
	3. Use of ecological materials
	4. Proper orientation of buildings
	5. Green areas
F3: Incompatibility between identity and design	1. Incompatibility between the forms of structures
	2. Relationship between parcel and building
	3. Plot and surroundings identity
	4. Texture/pattern/material relationships
	5. Uniform mass housing
F4: Lack of protection for continuity and the natural environment	1. Building height / road width
	2. Lack of protection for the natural environment and ecosystem
	3. Closed and isolated design
F5: Tall buildings	1. Building height / road width
	2. Effects of the predominance of tall buildings
F6: Plan-based versus project-based development	1. Incompatibility of project-based development with detailed local plans
	2. Grid plan
F7: Harmony between groups of buildings	1. Relationships between groups of buildings
F8: Interior design	1. Building interior design

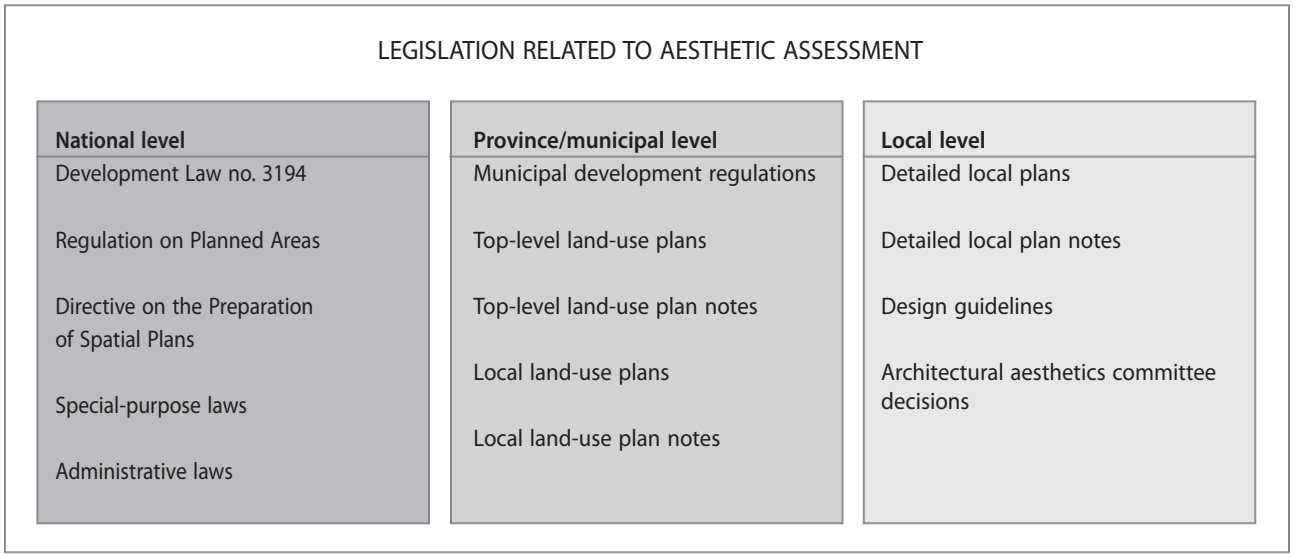

Figure 3: Legislation related to aesthetic assessment in Turkey.

Articles related to urban design and aesthetics in the urban laws and regulations on newly built environments (the case of Istanbul)		
Laws and regulations	Articles related to urban design and aesthetics	
Land development laws and regulations	Development Law	Forms, plot and expropriation, land readjustment, setback from the street, facade size, height
	Regulation on Planned Areas	Standards about plot size and depth, standards about yard distance from the road, buildings depth and height, facade principles, construction standards, the effect of facades on the character of the area, number of floors and height
	Directive on the Preparation of Spatial Plans	Standards about different area size, width of the pedestrian and vehicle ways, urban design guidelines
	Istanbul Development Regulation	Forms, plot standards for yard distance from the road, construction standards
Special-purpose laws	Environmental Law	Sustainable development, protecting the environment
	Mass Housing Law	Plot and expropriation, sustainable development
	Tourism Promotion Law	Sustainable development, protecting the environment
	Law on Restructuring Areas at Risk of Natural Disasters	Plot, land adjustment, sustainable development, protecting the environment
Administrative laws	Metropolitan Municipality Law	Creating harmony within the plan, building facades, standards for streets and boulevards, standards for advertisements' size and shape
	Municipal Law	Standards for advertisements' size and shape, land and house development, regular urbanization.
Other legal tools	Architectural aesthetics committee's principles	Deciding whether architectural projects express original ideas (According to the Development Law, relevant authorities can establish an architectural aesthetics committee based on the guidelines set by the ministry)
	Design guidelines	Form, plot, width of streets, skyline

Figure 4: Articles related to urban design and aesthetics in Istanbul.

Legal tools in the case of Istanbul		Relations between laws and regulations, and the eight factors established	
		None	Partly
Land development laws and regulations	Development Law	F2, F3, F4, F7, F8	F1, F5, F6
	Regulation on Planned Areas	F3, F7, F8	F1, F2, F4, F5, F2, F6
	Directive on the Preparation of Spatial Plans	F1, F4, F7, F8	F2, F3, F5, F6
	Istanbul Development Regulation	F7, F8	F1, F2, F3, F4, F5, F6
	Plan notes	F3, F4, F5, F6, F7, F8	F1, F2
Special-purpose laws	Environmental Law	F1, F2, F3, F5, F6, F7, F8	F4
	Mass Housing Law	F5, F6, F7, F8	F1, F2, F3, F4
	Tourism Promotion Law	F2, F3, F4, F5, F6, F7, F8	F1
	Law on Restructuring Areas at Risk of Natural Disasters	F3, F4, F5, F6, F7, F8	F1, F2
Administrative laws	Metropolitan Municipality Law	F1, F3, F5, F6, F7, F8	F2, F4
	Municipal Law	F1, F3, F5, F6, F7, F8	F2, F4
Other legal tools	Architectural aesthetics committee principles	F2, F5, F6, F7, F8	F1, F3, F4
	Design guidelines	F7, F8	F1, F2, F3, F4, F5, F6

Figure 5: Relations between laws and regulations on newly built environments and the eight established factors in Istanbul.

demonstrates that most of these legal approaches give a general description of these factors. For example, there are some general articles in the Development Law (Tur. *İmar Kanunu*) and its provisions concerning scale, mass, facade design, colour harmony, and ecological landscape, all of which are related to Factor 1 (character and identity). Some of the other parameters can be found in the Directive on the Preparation of Spatial Plans, referred to as "design guidelines". Similar references can be found in the special-purpose laws, administrative laws, and other legal tools. These brief appearances demonstrate the fragmentary nature of various provisions concerning issues of urban formal aesthetics, with no detailed statements about how the urban formal aesthetic for newly built environments must be created. In general, it can be said that there are no detailed legal tools related to urban formal aesthetics.

5 Conclusion

In the reconfiguration of urban spaces under neoliberal policies and priorities, changing urban features have been criticized for their lack of aesthetic quality. This situation, especially after the 2000s, has affected the newly built environments because the identity and texture of these areas were not taken into account in the plan. The concept of urban aesthetics has thus become much more important in this period. Although there are many studies concerning urban aesthetics, studies of urban formal aesthetics related to newly built environments are very rare. In this study, the most important factors affecting urban formal aesthetics have been determined using factor analysis, revealing which factors are lacking in the legislation and should be added to in order to regulate formal urban aesthetics in newly built environments. A comparison of these factors in the case of Istanbul demonstrates that there are fragmented articles inside different laws related to urban aesthetics, and that there are serious shortcomings concerning some factors in the legislation.

Moreover, this analysis demonstrates which factor components should be added in the legislation, and to what extent. Although some of the parameters are general, others are detailed. These parameters, in accordance with their scope, can be incorporated into legislation at the national level, city/town level, and local level. The parameters "character and identity" (F1), "green design" (F2), "protection of continuity and the natural environment" (F4), "tall buildings" (F5), and "consistency between plan-based and project-based development" (F6) are generally issues at the national level that should be added to the Development Law and special-purpose laws. Parameters such as "proportion, scale, hierarchy, dimension, diversity" (F1), "form of structures" (F3), and "building height / road width" (F5) should be added to the Development Law and its provisions at a general level, and "solid and void ratio in facade design, colour harmony, architectural motif" (F1), "ecological landscape design, integration with the main pedestrian path, proper orientation of buildings, green areas, ecological materials" (F2), "texture/pattern and materials" (F3), "building height / road width, controlling the effect of the predominance of tall buildings" (F5), "relationships between building groups" (F7), and "building interior design" (F8) are the subjects of detailed local plans and related plan notes, as well as design guidelines and the decisions of architectural aesthetic commissions at the local level. The parameter "project-based developments, grid plan, compatibility of project-based developments with detailed local plans" (F6) should be provided for in the Development Law. Likewise, "uniform mass housing" (F3) is a current problem that should be solved in the Mass Housing Law (a type of special-purpose law) at the national level. The parameter "protecting the natural environment and ecosystem" (F4) can be added to the Municipal Law at the national level. The parameters "urban identity" (F1) and "relationship between parcel and building, plot and surroundings identity" (F3) are issues at the city/town level that should be added to top-level land-use plans, local land-use use plans, and detailed local plans and their plan notes. However, most importantly, there should be compatibility between these laws and regulations. Another important subject is the capacity, level, and planning and design knowledge of professionals involved in planning and design processes. These should be consistent with each other in giving instructions, implementation, and management. As the analysis has pointed out, scholars' views in evaluating urban formal aesthetics are different from those of officials and designers.

These goals can be achieved by paying attention to and applying these parameters on both building design and planning scales in newly built environments. There is a significant need for the rearrangement of legislation, especially in the case of cities like Istanbul, which is Turkey's most important economic, cultural, and tourism centre. The knowledge gained from the Istanbul case may be useful for other countries facing the same dynamic development processes in their cities.

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How neoliberal globalization processes are transforming Kyiv's nodal areas

The abandonment of Soviet urban planning approaches, the liberalization of appertaining legislation, confusion under the pressure of business priorities, and the lack of a national urban strategy make Ukrainian cities vulnerable to ongoing change. This article analyses the current urban functional and spatial transformations that result from the influences of neoliberal globalization. It considers Kyiv's nodal areas as the focus of major structural changes. The methodology addresses these processes, including their characteristics and salient features. Because of their social and historical significance, some nodal areas are acquiring more cultural and symbolic value, but at the same time the impact of certain ill-conceived replacements of the original functions can be observed in practice. The study identified forty-four nodal areas and classified six types of transformations according to their social and cultural value. In most nodal areas, the cultural, aesthetic, representative, and communication functions are being replaced by commercial, service, and transport land uses. Selected case studies demonstrate the importance of continued public involvement in reorganizing Kyiv's urban space.

Keywords: urban structure, city nodal areas, neoliberal globalization, functional and spatial transformations, Kyiv

1 Introduction

The processes of world economic globalization and their influences on cities have been discussed by researchers since Geddes (1915). It is now clear that cities are the key generators and repeaters of global changes and the "backbone" of the global economy (Friedmann & Wolff, 1982; Friedmann, 1986; Hall, 1993; Sluka, 2007). At the same time, a city's environment becomes the first recipient of global changes, including emerging opportunities and challenges (Sassen, 2016). Market-driven urban development considers settlements to be mere economic assets that can be stripped of historical, social, and symbolic meanings, and turned into easily marketable commodities (Balibrea, 2001; Short, 2004; Križnik, 2011, 2018). These neoliberalization processes have been reshaping the landscapes of urban development for more than three decades; their combined forms and consequences continue to evolve through an eclectic blend of failure and crisis, regulatory experimentation, and policy transfer across places, territories, and scales (Peck et al., 2013).

A special type of "cities in globalization" (Taylor, 2006) is emerging in post-communist cities. These cities undergo various transformational processes caused by both globalization and the emergence of a market economy (Mezentsev, 2015). Urban landscapes formed under communism are being adapted and remodelled to new conditions shaped by the political, economic, and cultural transition to capitalism (Sykora, 2009). Looking at the morphology, land use, and social segregation in these cities, some typical capitalist city areas can be documented, while alongside there remain sections of urban landscapes that resemble frozen mirrors of communism (Sýkora & Bouzarovski, 2012).

For post-communist countries, including Ukraine, global impulses are superimposed on a number of internal features, many viewed as relics of the previous era. This complex patchwork strengthens the image of urban landscape transformation and also poses problems of preserving its attractiveness while at the same time seeking increasing functionality and innovativeness. In a socio-political context, it refers to an incomplete transition from rigid regulation and directive planning to one of a competitive business environment (Maruniak, 2007). Kyiv, which sees its role as the main recipient of global impacts in Ukraine as both the nation's capital and largest metropolis, is of particular interest in addressing these transformations. To investigate Kyiv's current transformations, we selected a specific urban structural element; namely, the city's nodal area. This site includes places that play the leading role in the urban planning structure due to the concentration of processes and functions essential to the city's daily life. This urban space has a direct impact on the city's emerging spatial identity. The attractiveness of nodal areas for various activities makes them both dynamically variable and vulnerable, often resulting in a loss of their authenticity and their social and cultural value. Below we first address the theoretical focus and discuss methodological approaches used in defining a city's nodal areas and identifying their transformations under conditions of neoliberal urban development. Second, at a more practical level, we identify Kyiv's nodal areas, taking into account their transformations; we also create a spatial model depicting those functional and spatial formations and patterns. Third, we illustrate those changes using case studies to inform the city planners how neoliberal transformations affect urban space and how public participation aids in making decisions regarding people's livelihood and urban development.

2 Theoretical background

2.1 Global neoliberal transformations and the city

Space is considered a social product in the early works of critical geographers and sociologists, including Lefebvre (1968, 1970, 1974), Jacobs (1961, 1970), Foucault (1967), Harvey (1973), and Castells (1977). Attention is focused on the fact that under current conditions related to urban planning priority is often directed to economic interests, with the needs of the local population not taken into account. In his research on postmodern urbanization, Soja (2008) seeks to emphasize that urban space creates innovation, creativity, and economic growth, but at the same time establishes additional hierarchy, inequality, social polarization, and injustice.

Cities are involved in the processes of world competition as a result of globalization influences (Salvati & Zitti, 2017). Marcuse and Van Kempen (2000) initiated the discussion about the social and spatial consequences of such involvement, which changes the economic and cultural functions and tasks of the city and simultaneously transforms the concept of urban planning. Urban planning is primarily aimed at creating a favourable business climate and restructuring the urban space and its manifestations in terms of architecture, image, and perception, all designed to meet certain standards that allow the city to attract international capital (Taylor et al. 2007, 2010). In the globalization process, despite performing a variety of functions from religious to military, cities have been subordinated to one major function; namely, to promote the centralization of capital (Trubina, 2011). In this regard, in recent decades the globalization process has become enormously influential in explaining changes within cities.

Following Harvey (1973, 1989), a number of critical geographers have focused on the study of new management structures in urban planning, as well as the impact of the real estate market on neoliberal urban development (Jessop, 1997; Peck & Tickell, 2002; Brenner & Theodore, 2002, 2003; Peck et al., 2013; Brenner & Schmid, 2014; Peck et al. 2017). The findings by Swyngedouw, Moulaert, and Rodriguez (Moulaert, 2000; Moulaert et al., 2001a, 2001b; Swyngedouw, 2002) are important in focusing attention on the issues addressed here. In analysing recent developments in several European cities, they modelled a new theoretical framework regarding contemporary neoliberal urbanization processes. They identified the interactions of three phenomena as being responsible for changing the order of urban development: 1) a neoliberal economic policy of the state that is related to market liberalization, deregulation, and privatization; 2) a new urban policy in which coalitions between the public and private sectors, as well as political and economic trends, enter the sphere of urban planning and development; and 3) urban development projects that discover new economic potentials and generate money. At the same time, it is recognized that a large part of the population impacted by such projects is simultaneously excluded from the planning and management process, which leads to socio-spatial polarization. The main aim of such urban planning initiatives is to generate rent from real estate developments and decouple urban planning from social urban development (Al-Hamarneh, 2011). Many cities in post-Soviet countries began to apply this planning approach in their urban management practices immediately following the Soviet Union's collapse.

Neoliberalism is commonly acknowledged as the dominant ideology driving post-communism (Pickles & Smith, 1998; Birch & Mykhnenko, 2010; Stenning et al., 2010). Golubchikov et al. conceptualize these post-communist urban economic geographies through the notion of hybrid spatialities that emerge from the mutual embeddedness of neoliberalism and communist legacies. They argue that the communist legacy has been alienated from its history and has become an infrastructure of neoliberalization (Golubchikov et al., 2013). The systematization of these transformation processes in post-communist cities in the context of globalization is considered in many works, including publications by Russian and Slovak geographers that discuss the power of influence of these processes in various parts of the city, including core-periphery relations (Sluka, 2009) and distinctive morphological, functional, and socio-demographic features (Matlovic et al., 2009).

In recent years, changes in urban space under the influence of neoliberal globalization processes have received attention in Ukraine. The impacts of globalization on various aspects of urban development are discussed by Maruniak (2007, 2013), Mezentsev et al. (2012, 2015), and Mezentseva (2017). Maruniak (2013) observes the challenges faced by post-Soviet cities in Ukraine. These include a marked social hierarchy, information and communication oversaturation, an increasing presence of global actors, loss of urban landscape originality, strengthening multiculturalism of the urban environment, an accelerated pace of change, and risks to sustainable development. Among the processes that most affect changes in urban space are aggressive privatization, commercialization, functional fragmentation, tertiarization, social polarization, and spatial segregation (Mezentsev & Mezentseva, 2012). The theoretical basis of research on global neoliberal urbanization and the context and transformations occurring in Kyiv are addressed in Al-Hamarneh et al. (2013) and Dronova et al. (2013, 2018). An analysis of the problems and prospects facing the development of Ukraine's capital city was made by Nudelman (2015), and a review of the post-industrial transformation of major Ukrainian cities was conducted by Pidgrushnyi (2015). These authors focus on current conditions related to ownership of land and properties in Kyiv and the replacement of traditional urban planning issues in the classic sense of structure and composition (Sosnova, 2011; Nudelman, 2013; Dronova & Poleshko, 2017).

2.2 Identifying city nodal areas

Due to changes associated with globalization, the transformations of urban space are the most evident within a city's nodal areas. Over fifty years ago, Kevin Lynch defined nodes as the leading spatial element in the mental map of the city – strategic points that the observer can freely enter. They are the crossroads or places of concentration of some special properties and are reflected in people's imagination mostly as compact points. In reality, however, they can be spacious squares or extended linear spaces and even central districts. If one considers the territory at the highest hierarchical urban level (national or global), then the city can be considered a node (Lynch, 1960). Lynch's perspective conveys a humanistic direction in terms of perceptual categories. The visual perception provides new perspectives useful in exploring new strategies for urban design and providing ways residents can envision their wellbeing in urban space (Morello & Ratti, 2009). Of Lynch's five key spatial elements of a city (paths, edges, districts, nodes, and landmarks), three of them – paths, nodes, and edges – were identified as significantly important in physical, perceptual, and psychological terms (Stevens, 2006). Norberg-Schulz (1971, 1980) likewise suggests that these three elements are not merely cognitive, but also behavioural. They are "existential": they organize human dwelling in the landscape at all scales and are the fundamental topological structure of space in relation to movement and visibility in that they define continuity, choice, and enclosure, respectively.

Following Lynch's seminal work, many studies recognized that some city elements may be memorable or "imageable" not because of their visual stimulus, but because they possess some personal, historical, or cultural meaning (Appleyard, 1969; Golledge et al., 1978). For example, the geometric or visual appearance of a little house may be unremarkable in its surroundings, but it becomes memorable because a well-known person lived there; thus, the meaning or semantics make the house a landmark (Jiang, 2012). Stevens (2006) also developed a comprehensive, robust model of urban morphology from a phenomenological and behavioural perspective. He defined intersections (nodes) as places of heightened awareness and decision-making where people slow down or stop and make choices about what they will do next and where they are going. Thus, they define their itinerary, although not always on pragmatic grounds. Intersections provide a broadened field of vision, opening up new options for experience and directions for movement. At intersections people can be distracted from their original intentions. It is assumed that the functional and aesthetic environments of nodes play a significant role in creating a sense of place.

3 Methods

Below we summarize the results of research on Kyiv's nodal areas over the past several years within the context of their heritage, functioning, and deployment of various activities during the Soviet period and after Ukraine's independence. Particular attention was paid to changes in the functions and urban space under the influence of neoliberal and global impacts, in particular commercializationand tertiarization processes, the emergence of business and shopping centres, the offices of transnational corporations and international capital, and subsequent reshaping of public space. The methods include visual observations, specific methods of human geography (e.g., statistical, comparative-geographical, graphic, and cartographic methods), and historical methods. These combined methods contribute to the creation of a spatial model of Kyiv's nodal areas and an analysis and assessment of their transformations.

The research was conducted in several stages. Initially, field data were gathered with an emphasis on the location of the nodal areas; specifically, their architectural solutions, original functions, and transformations. At the second stage, research and statistical documents, maps, and photographs of the Soviet and post-Soviet period containing information on the planning system were gathered, as well as quantitative and functional parameters of individual areas of the city. The third stage involved examining various public documents, defining nodal territories, and setting the criteria for those selected for in-depth analysis. An analysis of their transformation processes was conducted with an emphasis on changing social and cultural functions. This stage also included the classification of the nodal areas, taking into account their transformations. At the same time, more detailed case studies of those areas with the highest social significance were carried out.

Following Lynch's definition of nodal areas, we consider them as places or strategic points (foci) of the city; that is, those that have free access, are mainly located at the crossroads of important transport routes, have a large concentration of urban functions, and are characterized by both centripetal and centrifugal flows. These route intersections are particularly important for city residents because the transition from one transport/communication mode to another is perceived as moving from one structural element to another. The concept of a nodal area is one close to describing a "transportation hub," which is treated as a point where different types of transport converge and there is a transfer of passengers and goods from one mode to another. In this context, the city's nodal areas could be city squares or the intersection of important transport routes of the city where some streets are crucial for the city to function. However, it is not only traffic connections that are important nodal areas; it is appropriate to start with the notion of "process nodes," which represent "the passing, progression, a logical and consequent change of events, conditions and stages of development. Geospatial processes are the processes of interaction between geographical objects located on a specific territory and developing in time" (Alaev, 1977: 159). Thus, city nodal areas play the leading role in the city's urban planning structure due to the concentration of processes essential to the life of the city and related city functions. These are places where the intersections of material and spiritual paths, transport and human flows, information and communication links, and concentrations of interests of representatives of different forms of ownership as well as places of origin and the resolution of conflicts occur. The emergence of these "intersections of processes" leads to a concentration of transport, cultural, economic, social, administrative, communication, and service functions.

Traditionally, the elements of a city's mental map, including its nodes, are communicated through interviewing residents. With advances in computer technology, the image of the city can be studied in a quantitative manner by using results of surveys. For example, the syntactic image of the city can be based on space syntax research (Dalton & Bafna, 2003) or a digital image using 3D visual fields (Eugenio & Ratti, 2009). Jiang (2012) discusses how the image of the city can be automatically computed from geospatial databases. This is possible because the city possesses a living structure that contains an intrinsic hierarchy of artefacts. Thus, both legibility and the imageability of city artefacts can be quantified through a process of ranking the individual city artefacts in terms of

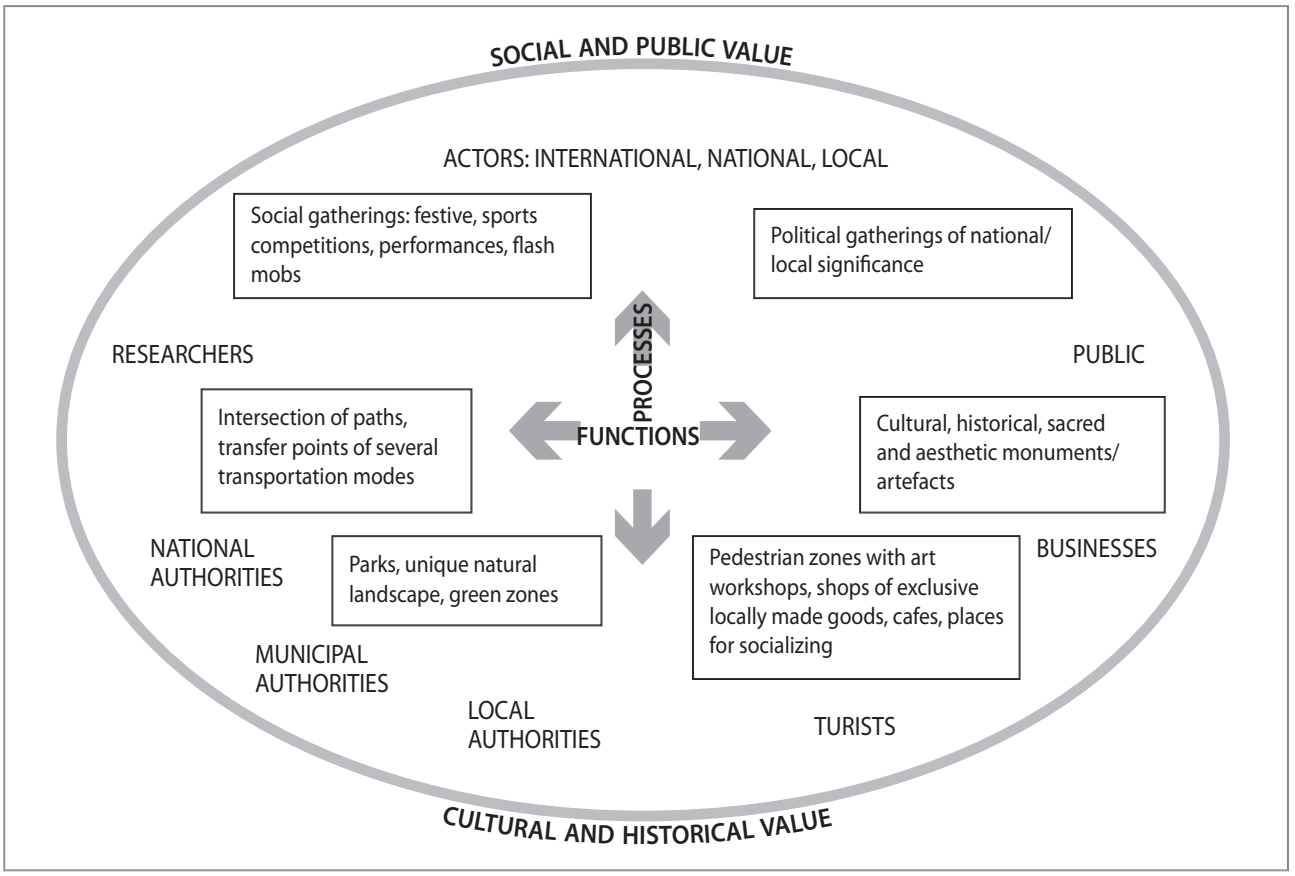

Figure 1: Logical scheme of a city nodal area (illustration: Olena Dronova).

semantic, topological, and geometric information. Although this approach has value, such a method is acceptable only for the material artefacts of the city. These combined processes and functions are better assessed using qualitative methods than a quantitative assessment.

From the perspective of human geography, taking into account all the historical, economic, and spatial aspects as well as social interests and movements in daily urban life and analysing the fundamental properties and features of cities themselves (see Lappo, 1997), we identified the defining characteristics of the city's nodal areas. They are pedestrian and transport accessibility; a high level of logistics; historical stratification; specialization; dynamism of functioning and, to a lesser extent, the dynamism of development; vulnerability to globalization impacts; the special attractiveness for various spheres of activity (private and public); dominant social significance; self-development; and the likelihood of conflicts.

In this context, Lynch (1960) distinguishes two types of nodes: those at major intersections and those characterized by a concentration of some activity. However, depending on the purpose of a scholarly or planning inquiry, such a distinction may not be especially informative (Dalton & Bafna, 2003).

In order to expand the current understanding of the types of city nodal areas, it is important to consider their pervasive social and public value. We consider the following to be the distinguishing criteria:

- Places where transfer points intersect using several modes of transportation;
- Places where important political gatherings of national or local significance (both organized and spontaneous) frequently occur;
- Places of frequent major festive, sports, and social events, performances, and flash mobs;
- The presence of cultural, historical, sacred, and aesthetic monuments, artefacts, buildings, and structures;
- The presence of pedestrian zones with art workshops, shops with exclusive locally made goods, cafes, and places of communication, recreation, and relaxation; and
- Places where parks and unique natural landscape elements are blended into the urban design.

Some nodal areas emerge on the basis of historical meeting places or marketplaces, or as the centres of the city's planning districts. Separate nodal areas play the role of etherialization and are akin to spiritual centres of the city (Mumford, 1961). They are the historical centres of cities, those territories that

are memorable due to the events that happened there, and squares that are distinct due to concentrations of sacral, cultural, and educational institutions, and architectural compositions of high aesthetic value. Obviously, the more distinctive the node, the more memorable it will be (Haken & Portugali, 2003; Hospers, 2010). Theoretically, nodal areas should acquire additional cultural and symbolic value through their social and historical or architectural significance (Figure 1). In theory, cultural and symbolic value should be preserved and maintained through the joint efforts of the municipal authority and public community. The role of the public, NGOs, and local communities is difficult to overestimate. Using the example of certain nodal areas, it is possible to track how the public is effective in thwarting the process of their chaotic development and seeks to preserve the unique appearance and value of nodal areas.

There are many examples of residents in a city's nodal areas raising concerns about their immediate inherent architectural appearance and stability. This situation arises when looking at developments in post-communist Ukrainian cities. In places where the existing functions and processes are concentrated, the processes of permanent replacement of those functions, as well as the corresponding reorganization, are most notable and visible in public awareness. Under the influences of neoliberal and globalization processes, a city's nodal areas become the most attractive for various business activities, and, in cases of constant changes of actors and priorities, they represent some of the most dynamic thinking. Thus, from a broad perspective on urban territory, these areas are the most vulnerable to permanent globalization changes. In this light it is worth noting that their cultural and architectural symbolism bears the burden of responsibility for displaying both their uniqueness and territorial identity.

4 Analysis of Kyiv's nodal areas and their major transformations

Due to the transition from communism to a post-communist political regime and a market economy, the main nodal areas of Ukraine's capital city have experienced the most changes. Historically, most of the city's squares perform commercial and trade functions and serve as public spaces where residents can congregate and communicate. Today, the vast majority have lost their natural functions and only serve as transport interchanges. Using the above economic, social, historical, and environmental criteria, forty-four territories were defined as nodal areas in Kyiv. Thirty-four already exist and ten have potential features of nodal areas (Table 1, Figure 2). However, the adjustment of urban land-use patterns to new social conditions and spatial transformations is ongoing (Sýkora & Bouzarovski, 2012) in all parts of the city. All nodal areas perform the functions of places along the major transport routes and intersections, and also provide specific representative, communication, service, and commercial functions. The last two functions are dominant for all nodal areas; sometimes they replace representative, cultural-aesthetic, and recreational functions.

The research confirms that the main phenomena that are changing urban processes and functions and that are deforming the nodal areas' spatial structures are commercialization, verticalization, spatial unification, and homogenization. In some areas, revitalization, re-sacralization, and social polarization are taking place against the background of general trends of tertiarization, gentrification, and significant growth in Kyiv's population. The city is growing by an average of 20,000 people annually. These additions are reflected in the real estate market and create additional pressure on the city's infrastructure (Dronova & Maruniak, 2018).

In the struggle for urban resources, new functions are displacing those considered less relevant for business or less competitive. The loss of public open spaces is evident in most of the city's nodal areas. Urban public spaces are being used for building business centres or shopping malls. One of the consequences of this commercialization is that people are leaving the traditional public places for rest and leisure on the streets and are moving inside the buildings. These spaces are experiencing a similar phenomenon over much of the rest of the world; namely, the urban landscape is becoming homogeneous and inhospitable.

There is a gentrification of certain nodal areas – for example, the luxury Arena City (*Arena Siti*) complex on Bessarabia Square (*Bessarabs'ka ploshcha*), the Diamond Hill (*Daymond Khyll*) apartment complex on Glory Square (*Ploshcha Slavy*), the Obolon Lypky (*Obolons'ki Lypky*) housing estate, and the renovated Central Universal Department Store of Kyiv (*Tsentral'nyy universal'nyy mahazyn Kyeva, TsUM*) on Kreshchatyk Street (*Vulytsya Khreshchatyk*) – compared with the organized markets of second-hand stores near four metro stations that contribute to the emergence of social polarization and fragmentation.

We recognize that the main driving forces behind changes in the city's image are developers with significant capital and connections with power authorities. They are ostensibly interested in making quick profits. Here we observe the manifestation of the negative sides of a neoliberal urban policy that prompts the replication of the monotonous types of spatial development and eliminates existing features of national and cultural identity. As a result, in central Kyiv's nodal areas, including protected zones of architectural monuments of world significance,

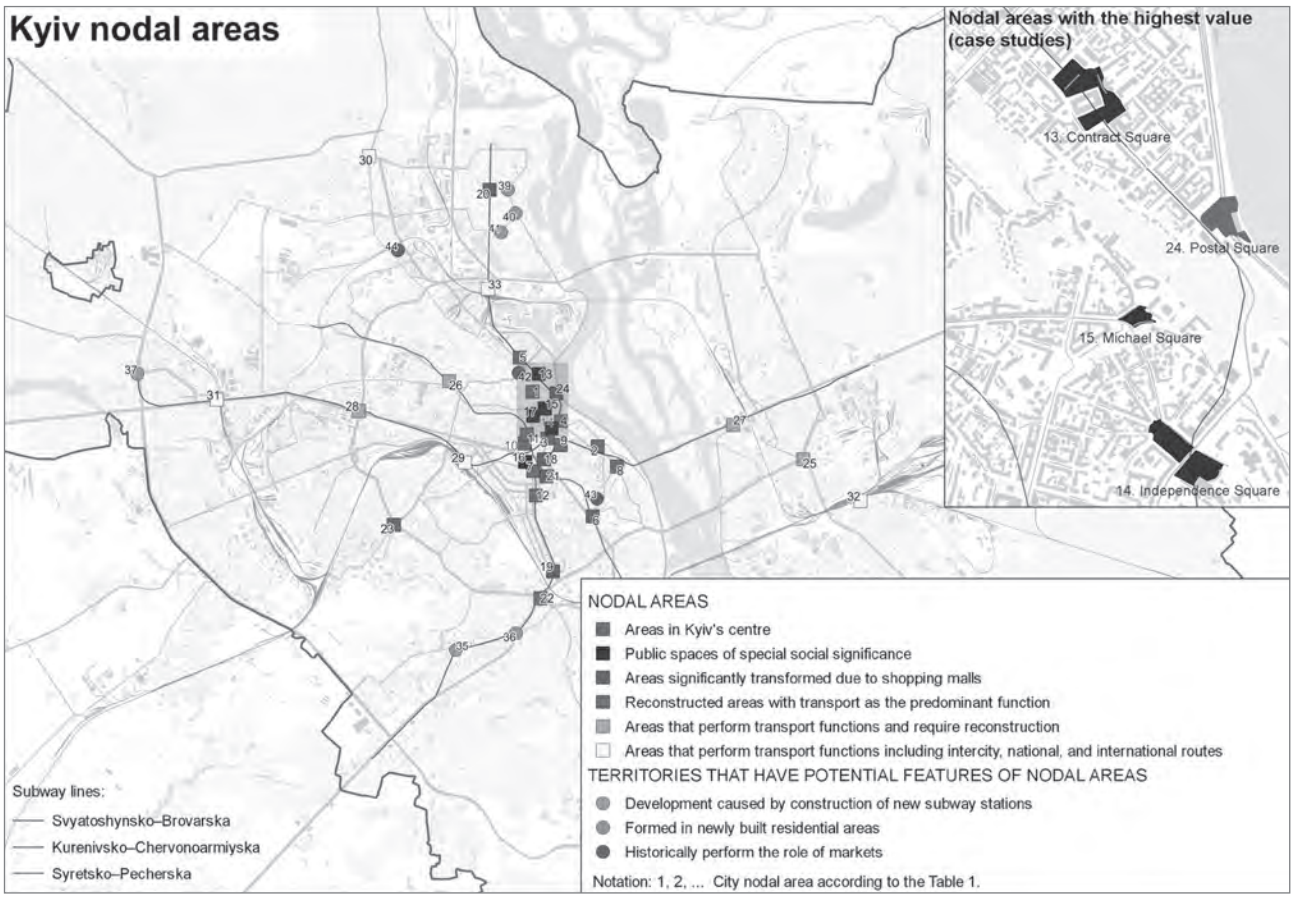

Figure 2: Nodal areas in Kyiv (illustration: Olena Dronova).

huge newly built multi-storey buildings are visually dominant. They deform the city's spatial identity, creating threats to its diversity (Al-Hamarneh et al., 2013). Such active urban development usually happens without the public being involved in the decision-making processes. Many problems have emerged and become commonplace in Kyiv in recent years: violation of the spatial structure and architectural ensembles of certain areas, destruction of green spaces, problems with sun exposure in neighbouring houses as a result of the creation of new structures, and unauthorized additions of upper floors of residential buildings. These and other problems often are met with protests by local residents.

In a spatial context, individual nodal areas represent "hybrid spatialities" (Golubchikov et al., 2013), where examples of Soviet Kyiv's modernist architecture are eclectically connected with post-Soviet high-tech skyscrapers. An example is Glory Square with the old monument of the Hotel Salute (*Hotel' Salyut*) and the new construction of the Diamond Hill luxury apartments. Separate territories represent a combination of architectural ensembles of the Soviet period and Kievan Rus, which are now affected by glass buildings of the globalization era on Sophia Square (*Sofiys'ka ploshcha*) and Michael Square (*Mykhaylivs'ka ploshcha*).

The advantage of the globalization processes is that Kyiv's citizens, guided by what they observe from numerous examples in other regions of the world, are beginning to realize the importance of engaging in the decision-making processes related to ongoing spatial, economic, and social urban development. The increased number, scale, and variety of such social movements in Kyiv reflects an increase in the level of public awareness as well as a consciousness of citizens regarding their responsibility for the city's future (Dronova & Maruniak, 2018).

In carrying out this research, we observed that the majority of Kyiv's nodal areas are influenced by global neoliberal processes. However, there are differences in the observable impacts of such transformations. Considering these differences in defining the criteria of nodal areas and their social and cultural value, the following types can be distinguished in Kyiv (Table 1, Figure 2):

- Areas in Kyiv's centre;
- Public spaces of special social significance;
- Areas significantly transformed due to shopping malls;
- Reconstructed areas with transport as the predominant function;
- Areas with transport functions that require reconstruction; and

Table 1: Main city nodal areas of Kyiv: criteria and value

Nodal area	Criteria						
	Transport accessibility	Political gatherings	Festive or social events; sports competitions	Cultural, historical, sacred, or aesthetic monuments and artefacts	Pedestrian zones with cafes, art shops, and places for socializing, recreation, and relaxation	Parks, squares, elements of unique natural landscapes	Value index
Areas in Kyiv's centre							
1. Andrew's Descent (*Andriyivs'kyy uzviz*)	1*	0	1	2	3	1	1.3
2. Arsenal Square (*Arsenal'na ploshcha*) and Maria Park (*Mariyins'kyy park*)	2	3	1	2	0	2	1.7
3. Khreshchatyk Street (*Vulytsya Khreshchatyk*)	2	1	2	2	2	0	1.5
4. European Square (*Yevropeys'ka ploshcha*)	1	1	1	1	0	2	1
5. Square near the October (*Zhovten'*) movie theatre	1	0	1	1	1	1	0.8
6. Lesya Ukrainka Square (*Ploshcha Lesi Ukrayinky*)	2	0	0	0	0	0	0.3
7. Leo Tolstoy Square (*Ploshcha L'va Tolstoho*)	2	0	1	1	0	0	0.7
8. Glory Square (*Ploshcha Slavy*)	3	1	1	1	0	2	1.3
9. Ivan Frank Square (*Ploshcha Ivana Franka*)	1	0	1	1	1	1	0.8
10. Theatre Square (*Teatral'na ploshcha*)	2	0	1	1	1	1	1
11. The area around the Golden Gate (*Zoloti vorota*)	2	0	1	2	1	1	1.2
12. Trinity Square (*Troyits'ka ploshcha*)	3	0	3	1	0	0	1.2
Public spaces of special social significance							
13. Contract Square (*Kontraktova ploshcha*)	3	1	4	3	2	2	2.5
14. Independence Square (*Maydan Nezalezhnosti*)	3	4	2	2	3	0	2.3
15. Michael Square (*Mykhaylivs'ka ploshcha*)	1	1	3	3	2	3	2.2
16. Taras Schevchenko Park (*Park imeni Tarasa Shevchenka*)	3	2	3	2	1	1	2
17. Sophia Square (*Sofiys'ka ploshcha*)	1	2	3	4	1	0	1.8
Areas significantly transformed due to shopping malls							
18. Besaarabi Square (*Bessarabs'ka ploshcha*)	1	0	1	1	0	0	0.5
19. Lybid Sqaure (*Lybids'ka ploshcha*)	3	0	1	0	0	0	0.7
20. Minsk Square (*Mins'ka ploshcha*)	3	0	0	0	0	0	0.5
21. Sports Square (*Sportyvna ploshcha*)	2	0	1	0	0	0	0.5

Nodal area	Criteria						
	Transport accessibility	Political gatherings	Festive or social events; sports competitions	Cultural, historical, sacred, or aesthetic monuments and artefacts	Pedestrian zones with cafes, art shops, and places for socializing, recreation, and relaxation	Parks, squares, elements of unique natural landscapes	Value index
Reconstructed areas with transport as the predominant function							
22. Demiyivka Square (*Demiyivs'ka ploshcha*)	4	0	0	0	0	0	0.7
23. Sevastopol Square (*Sevastopol's'ka ploshcha*)	2	0	0	0	0	0	0.3
24. POstal Square (*Poshtova ploshcha*)	3	0	2	3	2	4	2.3
Areas with transport functions that require reconstruction							
25. Darnytsya (*Darnyts'ka ploshcha*)	3	0	0	0	0	0	0.5
26. Lukyanivka Square (*Luk'yanivs'ka ploshcha*)	3	0	0	1	0	0	0.7
27. The area around the Left Bank (*Livoberezhna*) metro station	3	0	0	0	0	0	0.5
28. The area around the Shulyavka (*Shulyavs'ka*) metro station	2	0	0	0	0	0	0.3
Areas with transport functions, including intercity, national, and international routes							
29. Central Railway Station Square (*Vokzal'na ploshcha*)	3	0	0	1	0	0	0.7
30. Taras Shevchenko Square (*Ploshcha Tarasa Shevchenka*)	2	0	0	0	0	0	0.3
31. Brest Heroes Square (*Ploshcha Heroyiv Bresta*)	3	0	0	0	0	0	0.5
32. Darnytsya Railway Station Square (*Pryvokzal'na ploshcha*)	2	0	0	0	0	1	0.5
33. The area around the Pochayna metro station	3	0	1	0	0	0	0.7
34. The area around the Vydubychi metro station	3	0	0	0	0	0	0.5
Territories that have potential features of nodal areas							
a. Development caused by new subway stations							
35. Amur Square (*Amurs'ka ploshcha*); 36. Holosiyiv Square (*Holosiyivs'ka ploshcha*); 37. The exit from the Akademmistechko subway station; 38. The exit from the Kharkiv (*Kharkivs'ka*) subway station							
b. Formed in newly built residential areas							
39. Mykhaylo Zahorodniy Square (*Ploshcha Mykhayla Zahorodn'oho*); 40. Santiago Square (*Ploshcha Sant'yaho-de-Chyli*); 41. Obolon Square (*Obolons'ka ploshcha*)							
c. Historically perform the role of markets							
42. Grain Market Square (*Zhytn'otorz'ka ploshcha*); 43. Pechersk Square (*Pechers'ka ploshcha*); 44. Peter and Paul Square (*Petropavlivs'ka ploshcha*)							

Note: *Criteria display: 0 = absent, 1 = low, 2 = satisfactory, 3 = high, 4 = very high

- Areas with transport functions, including intercity, national, and international routes.

On the basis of observations, using data on the intersection of various types of transport, information on the frequency of various social and political gatherings at different scales, planning documentation on pedestrian areas and open public places, and the presence of unique architectural and natural landscapes, we constructed an index or score for thirty-four existing nodal areas and took into account ten potential ones (Table 1). The model aids in determining their functional and spatial patterns (Figure 2). It also identifies those nodes with the highest social significance: Contract Square, Postal Square, and Independence Square. To illustrate the neoliberal

Figure 3: Postal Square, Kyiv, Ukraine. The sign on the fence reads "There will be a museum!" (photo: Olena Dronova).

processes described above, we next examine the current state and transformations of these three areas.

5 Kyiv nodal areas: three case studies

The areas in the central part of Kyiv – Old Kyiv (*Staryy Kyiv*), Podil, and Pechersk (*Pechers'k*) – have a huge potential for development due to highly aesthetic buildings, green areas in close proximity, and cultural and historical heritage. However, today they are heavily affected by the loss of primary functions. Their space is occupied by shopping and entertainment centres, hotels, parking lots, temporary structures, outdoor advertising facilities, and unauthorized trade. The more these nodal areas are developed and occupied, the more green areas diminish. At the beginning of the twenty-first century, Kyiv was at the top of the list as one of the greenest cities in Europe; today it holds thirtieth place with an index of 32.33 out of 100 (European Green City Index, 2015).

Contract Square (*Kontraktova ploshcha*) is a former high-profile marketplace and the one of the city's oldest nodal areas. Today it is considered a slowly revitalizing public space with numerous conflicts. However, it remains the only space that still (at least partially) retains its identity as a free "intellectual" public space. The historical building of Kyiv-Mohyla Academy located on the square increases its value as a nodal area. However, the square is often perceived as an ordinary object of investment in the Kyiv real estate development, a place to exploit its spatial identity, and a convenient location and significant symbolic capital of historical importance. Quarters around the square are gradually witnessing the construction of large office centres and expensive hotels that are not historically inherent to this area. Elsewhere, public space is actively being privatized and used as outdoor terraces for expensive restaurants and office parking lots. Currently, and as a result of numerous public actions, the area is gradually emerging as a comfortable pedestrian space with art workshops, weekend markets for exclusive locally made goods, cafes, and places for socializing, recreation, and relaxation.

Postal Square (*Poshtova ploshcha*) has also undergone large-scale transformations. As a major transportation hub and with a powerful historical heritage, it is one of the most interesting and best-known areas in Kyiv. The latest reconstruction started in the summer of 2015. The idea is that people can have access to the banks of the Dnieper River by avoiding the motorway. Increasingly more European cities are seeking ways to open themselves to the river. Conceptually, the project has many advantages for Kyiv, but there are many points of debate in planning and implementation. The area is still inaccessible to people with disabilities, and the ramps that have been built do not meet contemporary standards. There are problems with greening and planting. Following the construction of a restaurant complex and a shopping mall, which are planned on the

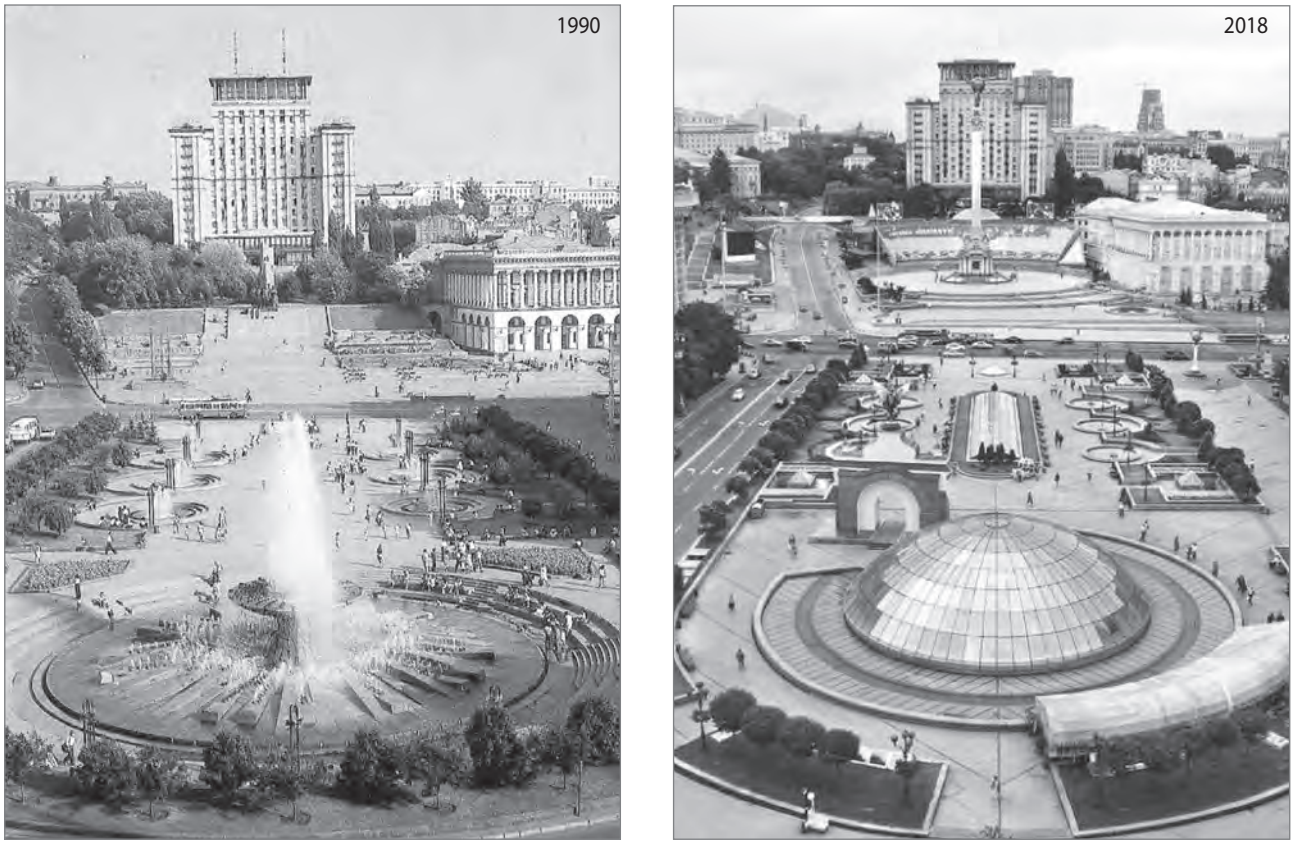

Figure 4: Independence Square: before and after the 2001 reconstruction (source: Internet 1).

site of the river station and underground (note the dominance of economic priorities), the area now faces enormous problems with the need for more parking spaces.

Another issue of major social and cultural significance is that archaeologists have excavated a unique ancient city of Kievan Rus (eleventh to twelfth century) in the process of constructing a shopping mall. Current debate continues among the public, the municipality, and the developer about the possibility of creating a museum instead of a shopping centre. Public activists physically blocked access to the construction spot, demanding the preservation of artefacts (Figure 3).

Another important nodal area is Independence Square (*Maydan Nezalezhnosti*). During the twentieth century it experienced a number of reconstructions. After gaining independence, the desire to turn Kyiv into a European city prompted the city's administration to begin reconstruction of Khreshchatyk Street and adjacent areas, including Independence Square. In 2001, reconstruction of the square was carried out and some monuments – in particular, the Independence Monument – were erected. The underground Globus shopping mall opened the same year despite repeated violation of construction and sanitary regulations. According to many experts, it would be more reasonable to preserve the green zones and archaeological finds that were discovered during the reconstruction process and turn this area into a museum of Kyiv's history, as was once planned (Figure 4).

Despite changes in the aesthetic and functional plan related to the general commercialization of space, the nodal area of Independence Square remains a place of national political activity. This square was the heart of the 2004 Orange Revolution and the 2014 Uprising of Dignity (a.k.a. Euromaidan) with protests across Ukraine, and it is a place in which the processes of national ideas and freedoms are localized and intersect. These events occurred despite the intentions of the former authorities to treat it only as a place for New Year's celebrations (Figure 5). This observation confirms self-development as a key feature of the nodal area.

Some squares that historically performed and still perform the functions of markets retain the features of nodal areas: Grain Market Square (*Zhytn'otorz'ka ploshcha*), Pechersk Square (*Pecherska ploshcha)*, and Peter and Paul Square (*Petropavlivs'ka ploshcha)*. Others were formed in the second half of the twentieth century and the beginning of twenty-first century in newly built residential areas: Mykhaylo Zahorodniy Square (*Ploshcha Mykhayla Zahorodn'oho)*, Santiago Square (*Ploshcha Sant'yaho-de-Chyli*), and Obolon Square (*Obolons'ka ploshcha).* Terri-

Figure 5: Independence Square, the Uprising of Dignity (Euromaidan) in Kyiv, 2014 (source: Internet 2).

tories that were developed due to the construction of new subway stations – Amur Square (*Amurs'ka ploshcha)* and Holosiyiv Square (*Holosiyivs'ka ploshcha)* – as well as the exits from the Akademmistechko and Kharkiv (*Kharkivs'ka)* subway stations also have features of nodal areas. A number of Kyiv squares that were formed at the intersection of newly paved streets were not included in the list of existing nodal areas: Ankara Square (*Ploshcha Ankary*), Panteleimon Kulish Square (*Ploshcha Panteleymona Kulisha*), Kerch Square (*Kerchens'ka ploshcha*), Volgograd Square (*Volhohrads'ka ploshcha*), and Valeriy Marchenko Square (*Ploshcha Valeriya Marchenka*). Today, they only perform the function of road intersections and do not attract residents pursing leisure activities. We assume that eventually these territories will acquire additional functions due to their transport accessibility. At the same time, and in the case of preserving current trends, the space of these areas is under threat of being transformed into a routine landscape of shopping centres, kiosks, and shops on wheels.

6 Discussions and conclusions

Significant transformations of post-Soviet urban space are occurring in many eastern European countries today. Cities are avoiding centralized urban planning and design and implementing many of the same neoliberal urbanization mechanisms observed in Ukrainian cities (Sosnova, 2011). This transformation has triggered significant changes in urban functions and in the characters of cities themselves. To understand and track those transformations, we considered structural elements observed in a city. Today we note that nodal areas have been transformed from the perceptual category associated with Lynch into processes that describe human livelihood and landscape changes at all scales. This change is a part of the fundamental topological structure of spaces associated with movement and visibility. Some nodal areas – particularly historical centres of cities and territories that are memorable for residents due to the events that happened there and squares that are distinct due to sacral, architectural, and educational institutions located there – play a role as symbolic focal points of the city and are associated with the city's spatial identity.

Although spatial identity should be one of the priorities in new construction in post-communist cities, it is often relativized and suppressed compared to other aspects of the urban environment (Kuvač & Schwai, 2017). In places where functions and processes are concentrated, the constant replacement of functions is most noticeable and observable, as well as the corresponding reorganization of the urban structure. Under neoliberal globalization processes, the city nodal areas become the most attractive for various activities and, in the event of a constant change of actors and priorities, they change dynamically and dramatically. Of all urban spaces, they are the most vulnerable. Additional research focusing on transformations can now examine how the processes of commercialization, tertiarization, verticalization, and selective deregulation of urban

space lead to the emergence of spatial homogenization and how nodal areas themselves are losing their original functions and identities.

As Lerner argues, in order to restore the soul of the city, it is necessary to encourage people to create places of meetings and to ensure that every urban function becomes a catalyst for such interaction. The more the city is perceived as an integration of processes and functions that bring together the rich and the poor, and the young and the elderly, the more places for meetings or encounters will be created with the result being a more vibrant city (Lerner, 2014). Design, functionality, protection of authentic buildings, and elusive features such as the spirit and the energy of the nodal areas are of great importance in creating the atmosphere of the city as a whole. Together they form the "face of the city". The features and criteria presented in this study make it possible to clearly distinguish nodal areas from other urban structures. The analysis of current nodal area transformations in Kyiv and their changes under the influence of neoliberal globalization processes demonstrate the need to restore social priorities. Attention should be paid to issues regarding their allocation, functioning, and development not only at the theoretical and cognitive levels, but also at administrative levels. Concepts of urban development at district and lower levels involving the public in shaping the city's image will help ensure that nodal areas are comfortable and meaningful for people's lives. These and other issues, including the application of integrated urban development approaches, require ongoing research.

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Development of a user-centered module: A contribution to flood-sustainable spatial planning

This article addresses user-related issues in flood-sustainable spatial planning. It presents the concept and methodological development of a user-centred module, one of three modules of a model for an integral system of flood-sustainable planning. By introducing daily routine analysis of a selected user profile, backgrounded by behaviour mapping, it addresses small but important data in the context of what is usually big-data analysis of flood modelling in order to bring the dynamics of everyday life into flood-sustainable planning. This user-centred module was developed and tested in the Planina Karst Field, a typical overflow karst field that is frequently flooded. It is a novel approach to addressing people's lives and their interactions with space that opens new perspectives on flood-related issues and can act as an alternative or complement to spatial-planning measures and processes.

Keywords: integrated modelling, user-centred approach, spatial planning, floods, behaviour mapping

1 Introduction

This article is part of the ongoing basic research project Integral System of Flood-Sustainable Spatial Planning, co-financed by the Slovenian Research Agency. The aim of the project is to set up a conceptual model that simultaneously considers the influences of human habitation and water dynamics. Accordingly, this model has three interrelated modules: a hydrogeological module, an urban planning module, and a user-centred module. The hydrogeological module addresses the characteristics of daily water level and discharge values, as well as detailed spatial and temporal monitoring of water levels, model settings to test the validity of parameters suspected to influence flooding, and application of the results to a real case of a flood of a certain intensity. The user-centred module addresses individuals' engagement with areas affected by flooding via analysis of peoples' daily routines in flood and non-flood situations as well as their attitudes toward flooding where they live in terms of safety and quality of life, testing and considering the validity of qualitative data gathered through analysis of daily routines in relation to parameters suspected to influence flooding, and the possibility of an application of these findings to a real flood situation. Finally, the urban planning module addresses the potential of both modules in relation to existing planning practice, taking into account legislation, planning processes, and outcomes.

In this context, the project's hypothesis follows three interrelated components: 1) residency is the main activity in a place, 2) modelling is a practical and useful approach for flood prediction and warning, and 3) it is crucial to equally consider natural characteristics and human interventions in the environment.

The idea of integration as a multidimensional concept in research and planning is not new. Integrated assessments and modelling are found as analytical approaches in research and concepts of scenario building in planning processes, especially when examining the impacts and causes of environmental problems, including floods (e.g., Medema et al., 2008; Hering & Ingold, 2012). Moreover, in recent decades several concepts, such as sustainable development (UN, 2015), the ecosystem approach (UNEP/CBD, 2000), and ecosystem services (MEA, 2005) – and more recently the nature-based solutions concept (UNEP, 2010; IUCN, 2012; Cohen-Shacham et al., 2016) – were introduced to spatial planning and development to introduce integral concepts into planning processes, policymaking, or governance. This reflects the fact that there is broad consensus on the need for integration; however, there is less agreement on what integration really means and how it can be effectively introduced into modelling processes. According to Hamilton et al. (2015), integrated assessment and modelling (IAM) is considered the integration of components across and within ten interrelated dimensions, which are arranged in three key sections: 1) key drivers of integration, 2) methodological aspects requiring integration, and 3) aspects of the system to be integrated. This last section is divided into four interrelated dimensions: 1) the human setting, 2) the natural setting, 3) spatial scales, and 4) temporal scales. They may directly underlie the content of the proposed conceptual model as well as the user-centred module. Accordingly, this article focuses on inclusion of the notion of dynamics of everyday life into the system of sustainable planning and flood modelling, and it refers to the conception of and methodological approach to the user-centred module.

2 Background

According to Hamilton et al. (2015), the human setting relates to all human elements relevant to a problem, and it may include population factors, politics, organizations, culture, technology, and economic sectors, or it may address human behaviour and choices mostly represented through agent-based modelling. This shows that several disciplines address human settings as a component in their fields of interests, regarding accuracy of the subject addressed and the scale (Golledge & Stimson, 1997). However, water-resource management in flood protection is still not well grounded, especially at the micro level (e.g., Medema et al., 2008; Hering & Ingold, 2012). For spatial planning, simulation of micro-level human activities that influence macro-level patterns is often presented through agent-based modelling (e.g., Jiang & Xiaobai, 2010; Müller et al., 2013); this mostly relies on big-data surveys or bases.

However, human systems are relational and, as further stressed by Hamilton et al. (2015), they are dependent on goods and services provided by the natural system and at the same time they modify the processes and components of the natural system through their activities and resource use. Therefore, setting up a user-centred module within the conceptual model for an integral system of flood-sustainable planning should be considered and this should be related to the hydrogeological (natural system) and urban planning module. According to Hamilton et al. (2015), this corresponds well with the aspect of the other two key sections: key drivers of integration and methodological aspects requiring integration.

Hamilton et al. (2015) define the natural setting as a dimension that relates to the integration of components of biophysical systems of interest (climate, land, water, atmospheric, and/or ecological systems). However, they note that one output cannot be the input for the others (the rest of the process), but that it is crucial to consider that natural components may change in relevance by scale; for example, something at

a small scale may be important for another dimension, which may have causes or impacts at a larger scale. This aspect must also be considered in spatial planning, especially in relation to flood-sustainable planning, because causes and effects may be manifested at very different locations and are greatly dependent on time and scale. Obviously, natural settings reflect uncertainty, complexity, and dynamics, and they are therefore characterized by ongoing changes. In relation to spatial planning, Nesshöver et al. (2017) call for adaptive management approaches, in which goals and actions are adapted to ongoing changes. In this respect, integration of socioeconomic and environmental considerations through integrated modelling is still rare in social studies (e.g., urban studies). However, it is becoming increasingly common for assessing and managing natural resources (e.g., Kragt et al., 2011; Laniak et al., 2013) and agricultural systems (e.g., van Ittersum et al., 2008). Integrated models simulating water flow usually involve various surface structures and levels (e.g., land surface, surface water, and groundwater flow systems), but do not address other primarily non-spatial / non-environmental characteristics (e.g., small and slow qualitative data on dynamic patterns of spatial use during daily activities).

The aspects of the human setting and natural setting directly reflect the notion of socio-ecological research, which addresses dynamic and coupled interactions between human and natural systems, emphasizing the coevolution of natural and social systems, in which understanding changes in one requires understanding changes in the other, rather than treating them separately (e.g., Young et al., 2006; Vespignani, 2012). This viewpoint is reflected in the development of the conceptual model for an integral system of flood-sustainable planning and represents a powerful base and determination for setting up a user-centred module as one of the model's components. To understand environmental problems and help design effective policies, it is essential to understand the underlying human drivers. Nesshöver et al. (2017) point out that there is a need to develop and gradually put into practice a sort of socio-ecological modelling, stressing among other things the importance of monitoring social changes and most of all starting to define them (from the planning perspective) with regard to the characteristics and context of a place. Developing the bipolar socio-ecological concept further, Rebernik et al. (in press) discuss a four-dimensional model of addressing social challenges, introducing a component at the relational level, focusing on the relations between users and the environment/government, users and technology, and the environment/government and technology.

Through enhancement of such concepts, local knowledge is introduced into planning and research, either via information such as what people know and what experience they have (a historical dimension), or from information on how they function and manage to achieve a sustainable or desirable way of life. In developing a user-centred module, two methods addressing spatial-use relationships were introduced: GIS behaviour mapping (e.g., Goličnik Marušić & Marušić, 2012) and time quality assessment (TQA; Marušić & Goličnik Marušić, 2016, 2017), both reflecting relations between users, the environment or governance, and technology. The first addresses the micro scale, analysing dynamic patterns in the use of selected places by time of day, time of week, user group or age group, type of activity, and cohabitation of activities among themselves, as well as the place configuration and activities. TQA is an advanced approach, constituted as an integrated modelling frame, analysing the daily routines of user profiles and assessing values of places via the quality of time spent in a place, including users' economic means to spend that time in a place.

TQA with the concepts of daily routines as components of the user-centred module may be paralleled by a time-scale dimension from Hamilton et al.'s (2015) integrated modelling approach. It is important to consider the characteristics of time scales addressing processes that, as shown by Hamilton et al. (2015), can occur over timeframes spanning minutes to hours or less (e.g., some biological or chemical functions), or days to weeks (e.g., ecological processes), whereas others may occur over years (e.g., socioeconomic processes), decades, or longer (e.g., species assemblage shift or climate change). The time dimension is especially relevant because natural and human settings operate in different timeframes. When building a model for an integral system of flood-sustainable planning and its constituent modules, the challenge is to recognize a phenomenon with a short timeframe as an input for the process of a longer timeframe, or vice versa. Time scales for natural or social processes always take place in a certain environment, and so they are related to a spatial scale; therefore, they are interconnected. In the research for this article, all four dimensions claimed to be essential aspects of system to be integrated (Hamilton et al., 2015) are conceptually reflected in the model and are interpreted within each of its modules (see Figure 1).

3 Methodology for user-centred module design

The module development followed a broader concept of user engagement in spatial development issues. However, it did not apply a concept of multilevel stakeholder involvement usually managed by top-down planning process protocols. It instead followed an often-overlooked qualitative bottom-up, slow, small, and deep-data-oriented research approach, based

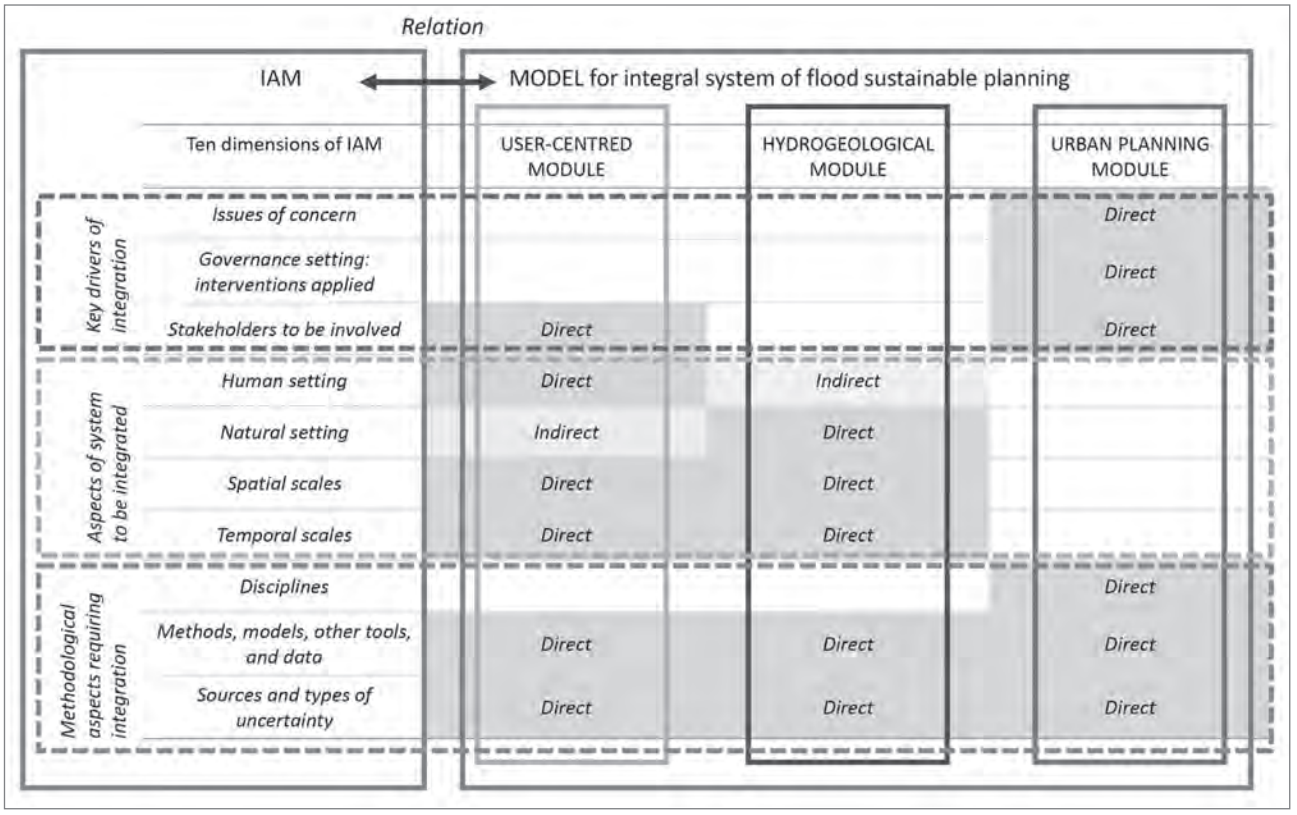

Figure 1: The conceptual relation between Hamilton et al.'s (2015) concept of IAM (left box) and the conceptual model for an integral system of flood-sustainable planning and its modules (right box; illustration: Barbara Goličnik Marušić).

on ethnographic research implementing components of user-oriented methods for studying spatial-use relationships: behaviour mapping and time quality assessment (TQA). Both methods resulted in the combined concept of a user-profile daily routine, which shows spatial-temporal dimensions of peoples' engagement with a place of interest. This concept of daily routines represents the main dynamics related to the social component of the model. However, in addition to analysis of peoples' daily routines in flood and non-flood situations, the model also addresses various other issues – from attitudes toward flooding, perceptions of safety and quality of life to typology and operability of data – and so a well-structured user-centred module design protocol was followed:

- Spatial setting;
- Defining relations between users, space, and flooding;
- Defining research techniques;
- Methodology;
- Data organization and coding;
- Analysing and interpreting the data collected;
- Valorization of the module as a spatial planning analysis and interpretation tool.

The protocol steps referring to preparatory activities for module design are commented on in Section 3, and the protocol steps for testing (implementation and valorization) of the module are commented on in Section 4. While designing the module, the following working hypothesis was formulated regarding the potential applied value of the module for spatial planning: Building and testing the module on or around a case where people are used to living with floods may result in greater applied value because regular floods force people to react; they may be more aware of threats and may be better skilled at adaptation. This may help shape the module toward effective (adaptation, management, and planning) solutions aimed at proactive solutions.

3.1 Spatial setting

The original research proposal selected an area where it was possible to develop a comprehensive approach to a flood-related place-sensitive and people-oriented conceptual model to help understand related dynamic processes and to promote integrated planning tools and practices. Accordingly, the Planina Karst Field in southwestern Slovenia was selected as the study area.

Hydrologically, the Planina Karst Field is an important confluence of karst water from several subcatchments. The total size of the catchment is estimated at 746 km^2. In the southern part of the karst field, water emerges from Unica and Malenščica springs. Water is discharged diffusely from Malenščica Spring, and from Unica Spring water flows through a well-developed

system of karst channels. The two watercourses join in the Unica River, which crosses the karst field and sinks on its northern and western edges. The water eventually re-emerges at the edge of the Ljubljana Basin as the Ljubljanica River. The Planina Karst Field has an area of over 10 km^2 and has a relatively flat bottom with elevations between 442 and 447 m. It is a typical example of an overflow karst field that is frequently flooded. On average, the karst field is flooded forty-one days per year. The flood (lake) level in the karst field varies by approximately eight metres, from 442 to 450.2 m; the volume of water during a severe flood can reach approximately 26 million m^3 with a lake area of 10 km^2 (Kovačič & Viršek Ravbar, 2010; Viršek Ravbar et al., 2012).

The hydrogeomorphological characteristics of the Planina Karst Field crucially contribute to variability of the landscape during the year. In terms of landscape variety, the characteristic patterns in the karst field include meanders of the Unica River, vegetation units, dominant individual trees, and agricultural land use (grassland), which together with natural characteristics of the area form a unique combination of cultural and natural landscapes (Marušič & Jančič 1998). The fields and settlements are on a slightly raised narrow terrace above the flood plain. The karst field is a nature park, a recognized part of the cultural landscape and natural environment, with several levels of nature conservation status (Naravovarstveni atlas, 2018).

The largest and the oldest settlement is Planina. It is located on the elevated edge of the Planina Karst Field (the foothills of Mount Planina); this ribbon settlement has two nuclei. The majority of the population along the karst field, about 55%, lives in Planina. The village of Laze, on the opposite side of the karst field, has 23%, and 16% of the population lives in Grčarevec in a somewhat isolated arm of the northwest corner of the karst field. From 2008 to 2017, the population growth index was +104.8 for these villages.

When the Planina Karst Field is filled with water at a level of 447 m, about 130 m of the lowest part of the road from Planina to Laze is underwater. This shows how water may affect people's lives in the area. At this point, houses and other buildings are not affected. When the water level reaches 449 m, the entire road connecting Laze and Planina is flooded. The road from Planina to Hasberg Castle is also flooded. Travel between settlements is possible by taking bypass roads. Buildings are affected when the water level reaches 450 m; this affects some that have been there for more than one hundred years (Figure 3). When the water level reaches 453 m, the direct connection between Hasberg Castle and Laze via Planina (the hamlet of Dolnja Planina) is flooded, and buildings are also flooded (see Figure 4)

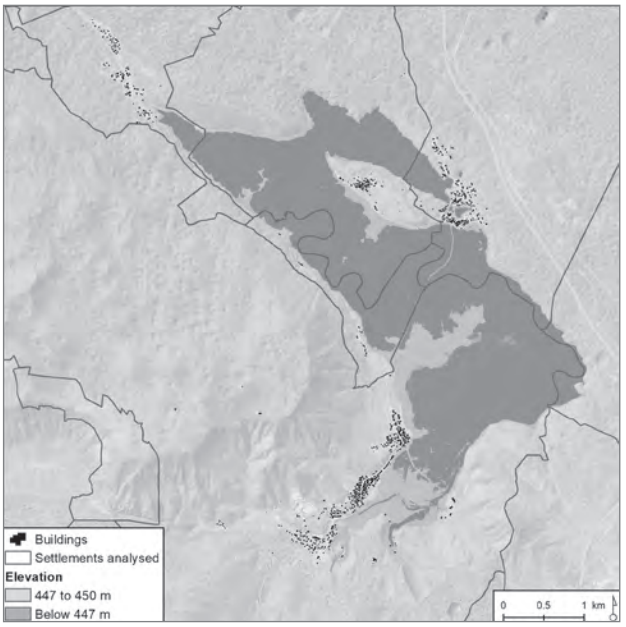

Figure 2: The Planina Karst Field with flood level marked (map by: Simon Koblar; source: Agencija Republike Slovenije za okolje, 2015 and Statistični urad Republike Slovenije, 2018a).

The STAGE bottom-up adjusted approach by the Slovenian Statistical Office (Statistični urad..., 2018b), which can help interpret big data in a small-data manner based on a grid data system, was used to better understand the study area and to prepare a data-gathering scale-frame for a user-centred module. This is conceptualized in a bottom-up manner and is oriented toward small data and its interpretation rather than big data, which do not fit the small-scale local context well. The village of Liplje has the sparsest population. The settlements of Laze, Jakovica, and Grčaravec have a similar population density, and Planina is the most densely populated settlement in the area, with a few locations where thirty to forty-two people live per 100 × 100 m grid unit (see Figure 5).

3.2 Defining relations between users, space, and flooding

Content-wise, the main challenge in user-centred module development is the notion of user-space-flood relations. To introduce soft and qualitative dimensions of flood-related issues, one of the initial steps of module building sought to understand these relations. Several topics were relevant, such as living with flooding, threat and fear, interest in the landscape for its appearance and in nature as a process, being part of such a process, being influenced by floods, exacerbating the effects of flooding by living there, and so on. A series of brainstorming meetings resulted in identifying related issues and target issues. Four main target issues were identified: the usual daily routine in the karst field when there is no flooding, the usual daily routine in the karst field when it is flooded, threats

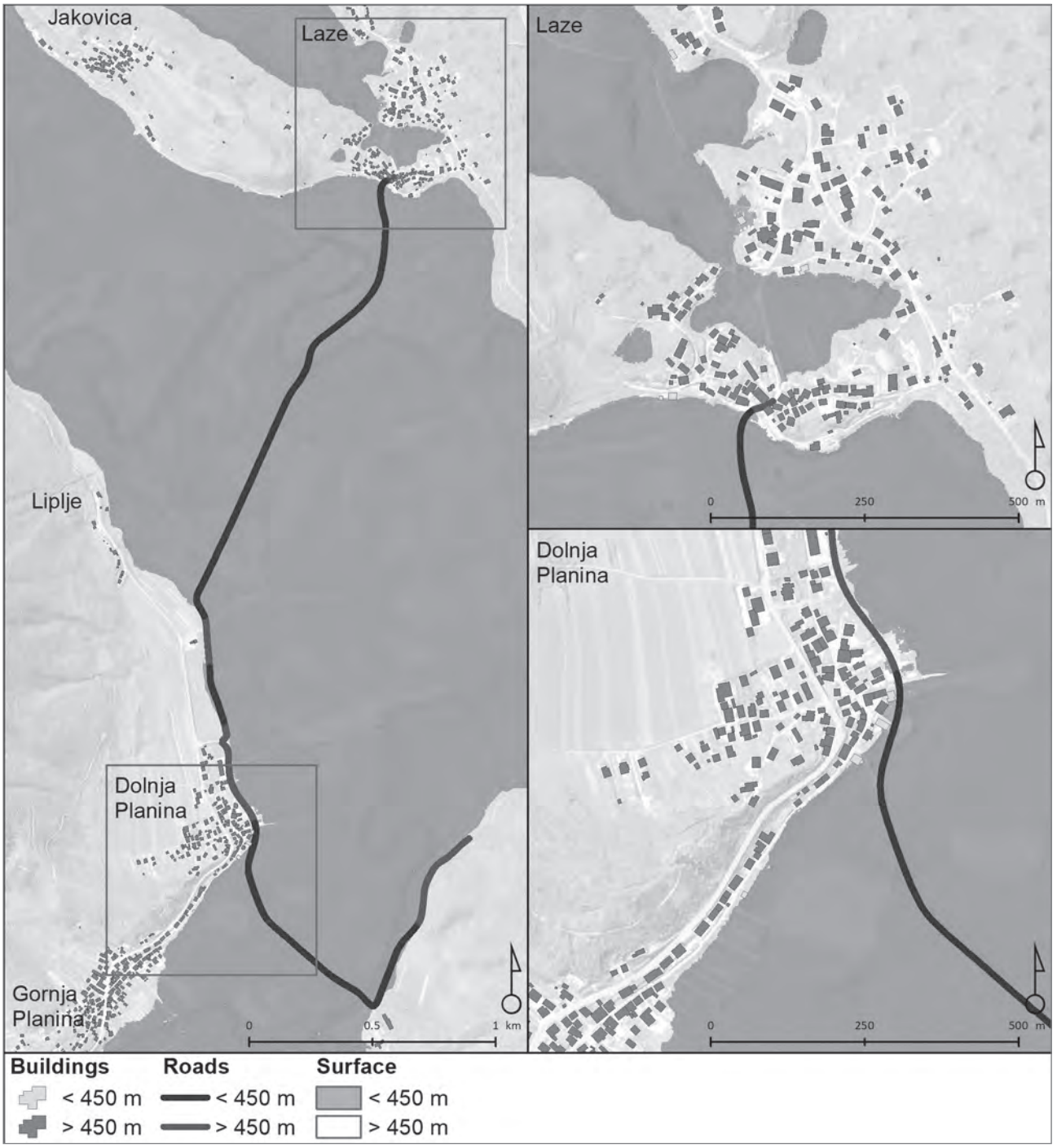

Figure 3: Water reaching 450 m (map by: Simon Koblar; source: Agencija Republike Slovenije za okolje, 2015 and Geodetska uprava Republike Slovenije, 2017, 2018).

from and attitudes toward flooding, and the human impact on floods. This provided the basis for developing a questionnaire for people in the study area.

3.3 Defining research techniques

After establishing the base for the module, data collection tools and the target group were addressed. Based on the four target issues, a questionnaire was developed with five parts: 1) general user information, 2) the usual daily routine in the Planina Karst Field when there is no flooding, 3) threats from and attitudes toward flooding, 4) the usual daily routine in the karst field when it is flooded, and 5) the human impact on floods. Each of the five parts had its own structure and focus. Parts 1, 3, and 5 were suitable for structured, semi-structured, and (in a few cases) open questions. Parts 2 and 4 were related to individuals' daily routines and therefore suitable for filling in tables and making maps.

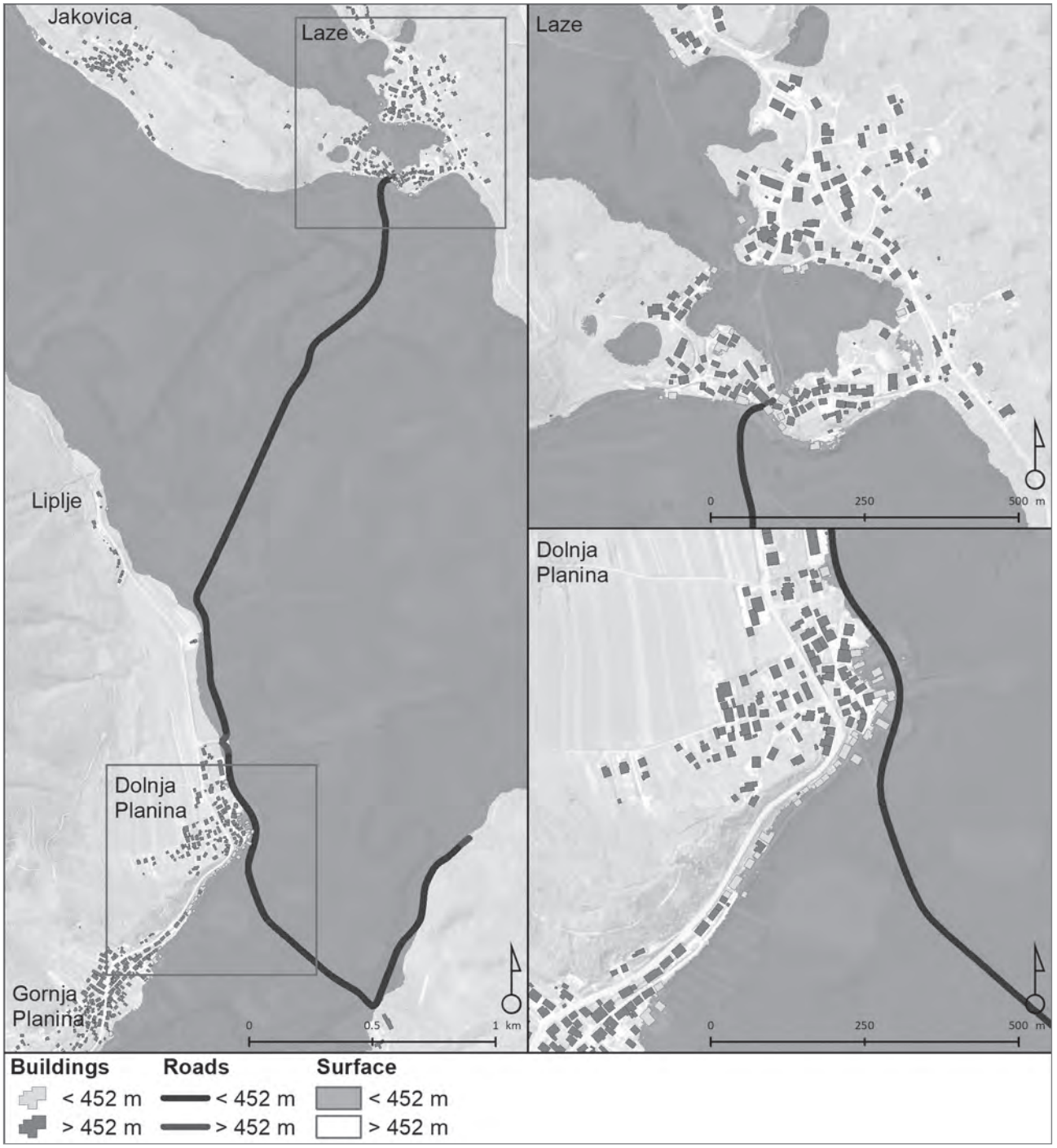

Figure 4: Water reaching 453 m (map by: Simon Koblar; source: Agencija Republike Slovenije za okolje, 2015 and Geodetska uprava Republike Slovenije, 2017, 2018).

Part 1 (general user information) was subdivided into eleven sections referring to basic descriptive data about the interviewees (year of birth, sex, activity, profession, education, place of residence, place of work, household size and characteristics, native vs. immigration status, and individual welfare level), all corresponding to the categories used by the Slovenian Statistical Office. Part 3 (threats from and attitudes toward flooding) starts with four open questions addressing flood threats, levels of threat regarding water level, ways flooding may threaten people in the karst field, and the influence of flooding on everyday life. The next set of questions addresses peoples' perception of flood causes and how floods influence their life and work, for both usual and extreme flood situations. The questions also address subjective experiences with extreme floods and flood damage. Finally, participants were also asked whether they would consider moving because of flooding. Like Part 3, Part 5 asked about some causal relations, focusing on the human impact on floods; that is, whether there is a rela-

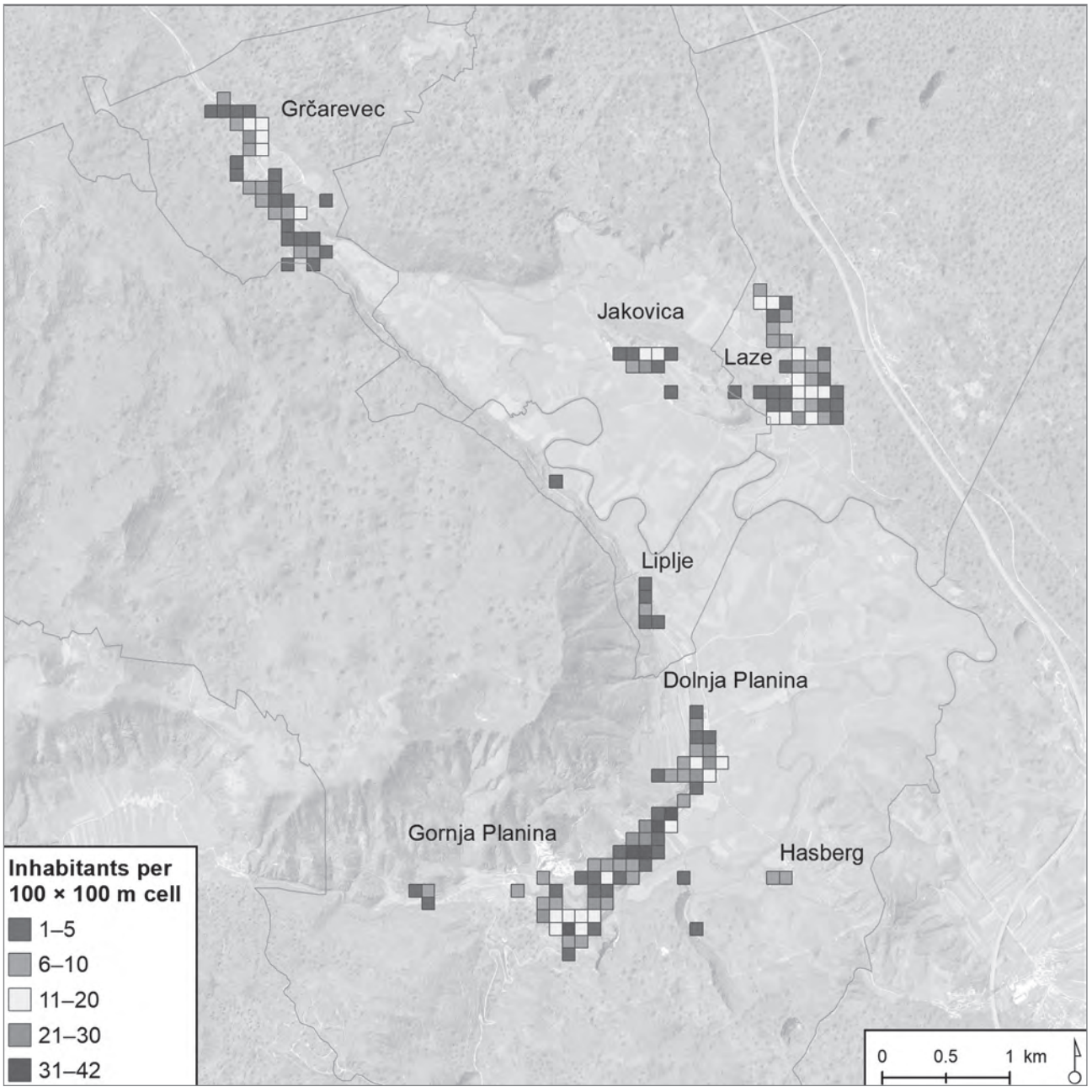

Figure 5: Number of people per settlement shown in a 100 × 100 m grid (map by: Simon Koblar; source: Statistični urad Republike Slovenije, 2018b and Geodetska Uprava Republike Slovenije, 2017, 2018).

tion between people's activity in the karst field (residences, recreation, etc.) and flooding, and how can people influence flooding in the karst field.

Parts 2 and 4, dedicated to the people's daily routines when there is no flood (Part 2) or during a flood (Part 4), were composed of two pairs of sets of questions. The first part asked about a typical weekday routine, and the second about a typical weekend routine. In the case of no flood (Part 2), the questionnaire asked respondents to imagine a lovely day when it is nice to be outdoors. In addition to filling in a table describing activities people are involved with, the location where the activities take place, and the time of the activities, the respondents were also asked to enter the location of activities related to the karst field on a prepared map. A completed sample table and map were prepared as help. Options for administering the questionnaire were also considered. Several options were prepared: a face-to-face interview, an on-line questionnaire, and a combined approach.

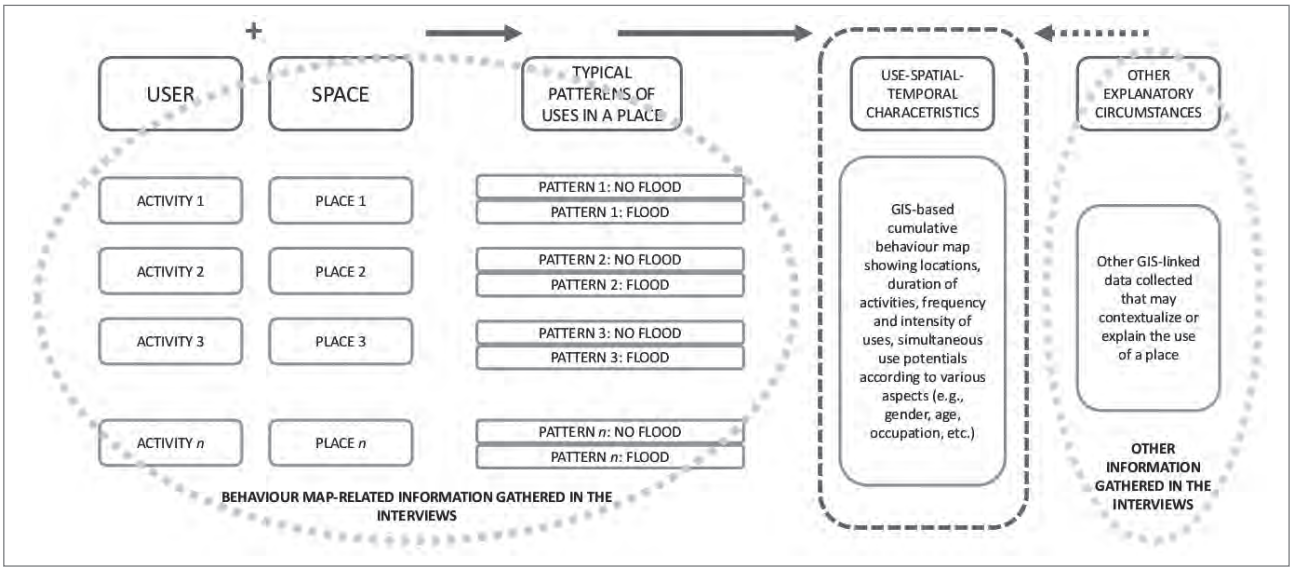

Figure 6: Components of the user-centred module and characteristics of daily routines (illustration: Barbara Goličnik Marušić).

3.4 Methodology

The protocol involved testing the interview method. For the testing phase, four individuals from the area were contacted based on a recommendation from the local authorities or local volunteers that contacted us after the project was presented in the local newspaper. The testing phase showed that the questionnaire fit the interviewees and confirmed the interview protocol. There was a strong preference for a face-to-face interview. However, in getting to know the area, its socio-economic structure (Statistični urad..., 2018a), and people's availability for collaboration, a specific user profile emerged as target group for building up and testing the module.

A second round of interviewee selection was based on recommendations from those previously interviewed and recommendations from the Karst Research Institute (a partner institution in the project mostly working on a hydro-geological module) or using random selection in order to meet the minimum criteria for the sample size. In the end, thirty-two participants were interviewed, sixteen women and sixteen men, average age fifty-six, half of them employed, and half of them already retired. The interviews followed the qualitative research concept and used a typical ethnographic research approach (e.g., Bernard, 2011). The interviews were conducted from 16 March to 9 September 2017. Each interview lasted one to two hours.

4 A user-centred module

The purpose of setting up a user-centred component in the conceptual model for an integral system of flood-sustainable planning is, first, to conceptualize a monitoring system for dynamic patterns of spatial use and users' daily routines and, second, to define user groups and thus acquire relevant input data corresponding to the characteristics of these user groups. The five-part questionnaire addressed both use and routine, and it included three main data sets: 1) users' activities, 2) locations where these activities took place, and 3) other circumstantial information (e.g., socioeconomic parameters of users' profile and attitudes about living in an area affected by floods). By overlapping the information about users' activities and the locations where they take place, new derived information emerges about typical patterns for how a place is used. This interprets two of the aspects of Hamilton et al.'s (2015) model: the human dimension (users' activities, characteristics, and circumstances) and the spatial scale (the dimension and accuracy of use). By adding the temporal dimension of the daily routine, it also addresses the time scale. By looking at patterns of use during floods and in non-flood conditions, it also interprets the temporal scale in a broader sense (considering the effects of seasons and weather) and also reflects on the natural setting. The final output combining these dimensions into the user-centred module is the temporal spatial-usage characteristic of the user profile. Figure 6 shows the components of the user-centred module and characteristics of the daily routines of the user profile examined.

4.1 Data organization and coding

A Microsoft Excel database was used to create a characteristic user profile from the interview sample. In addition to basic descriptive statistics, it also made possible various crosstab analyses of qualitative comments explaining the sample. The questionnaire data were entered into separate sheets based on the questionnaire ID. This database was then transformed into

a GIS environment (ArcGIS 10.3.1), which made it possible to identify user-place relations and interactions.

A GIS database with relevant spatial data (e.g., terrain, orthophotos, land use, roads, buildings, and population data) was constructed. These base data made it possible to precisely digitalize user behaviour maps, which were presented with polylines. Those were combined with data from the questionnaire. This database allowed precise analysis and filtering of spatial data based on various criteria. GIS behaviour maps were produced from digitalized daily routines, which were reduced to activities outdoors and away from home. Thus, the analysis was oriented toward common or usual activities. These typical daily routines include recreational activities such as walking, hiking, or cycling as well as travel to work and for various services.

The data were collected in a verbal format describing the route used and time needed for the activity, and these data were transformed into a GIS-supported format. Each route had a duration variable. Because some interviewees were reluctant to estimate the time for an activity, the missing time data were calculated based on other clear cases (very clearly presented locations of routes and the time needed for traversing them).

To safeguard personal data, the collected routes were always calculated from the first closest intersection. All activities were coded. Walking as an activity was linked to routes located in the relatively flat area; hiking as an activity was linked to the routes leading into the surrounding hilly countryside. When an activity took place in the lower areas as well as in higher-lying countryside, it was marked with a combined code referring to walking and hiking. Cycling was also coded as a separate type of activity. Based on the reported times for routes taken for either activity, speed rates were calculated: walking 4.8 km/h, hiking (up and down) 2.6 km/h, repeated hiking up and down 3.4 km/h, moderate cycling 9.3 km/h, and faster cycling 19 km/h. Further, range was calculated with regard to time intervals. Activity duration units were rounded off at thirty- and sixty-minute intervals.

4.2 Implementing and testing the module

This section focuses on the concept of applicability and the principles applied, rather than on interpretation of the results themselves. It shows how such a module can contribute to an integrated model addressing flood issues in spatial planning.

4.2.1 Analysing and interpreting the data collected

First, the characteristics of user profiles were analysed to determine whether there were one or more user profiles in the area studied. To illustrate, a basic descriptive analysis of the collected data showed that the typical user profile was an elderly well-educated population (50% university degree, 41% high school degree) attached to the area (one-quarter of those interviewed work in their place of residence, one-quarter commute to other statistical regions, and retired persons are mostly at home). A high level of place attachment can also be interpreted from the fact that half of those in the sample are locals, and half of them moved there. Despite the flooding issues, all of them except for one person (due to age issues) would prefer to stay in the area. In terms of personal finances, the user profile indicates that the sample is comfortable (more than 60% of the interviewees manage their daily expenses well, and 25% consider themselves highly capable at managing daily expenses). Regarding affording hobbies and purchasing goods they are interested in, 25% manage such needs well, 25% consider themselves poor managers, and 50% feel capable.

Second, the basic GIS-based analysis and its interpretation revealed characteristics of each routine. The results showed maps of locations and temporal dimensions: when and for how long each type of activity was performed and by whom (categorized by age group, sex, or use). To obtain the intensity of use (i.e., where, when, how long, and how often people tend to participate in an activity), advanced GIS-based analysis was carried out to produce composite behaviour maps. These refer to spatial-temporal ranges of use showing several spatial-temporal dimensions of place use. As an example, Figure 8 compares the intensity of using routes for walking and hiking during flooding and when the karst field is dry.

Such analysis makes it possible to comment on places' frequency and intensity of use. For planning or decision making, this can reveal potential carrying capacities of places in relation to changes (e.g., flooding or not). For example, in the test case it shows that when the karst field floods, recreation such as walking and/or hiking is not significantly affected. Instead, floods in the karst field attract people to enjoy the scenic landscape and to change their usual daily routines for walking in other areas not affected by the water. The influence of water is greater in the northern part of the karst field, where the routes between the meadows cannot be used and people more often use higher routes, usually roads. In the southwestern part, the area around Malenščica Creek fills with water most quickly, and therefore the scenic routes between the Unica River and Malenščica Creek and those through the wooded countryside toward Hasberg Castle cannot be used, and people choose either the road connecting the hamlet of Gornja Planina and Hasberg Castle, or more likely go for a walk in the higher-elevation woodlands. The analysis of the daily routine also showed that sometimes the cumulative time needed for walking is longer due to flooding in the karst field; in par-

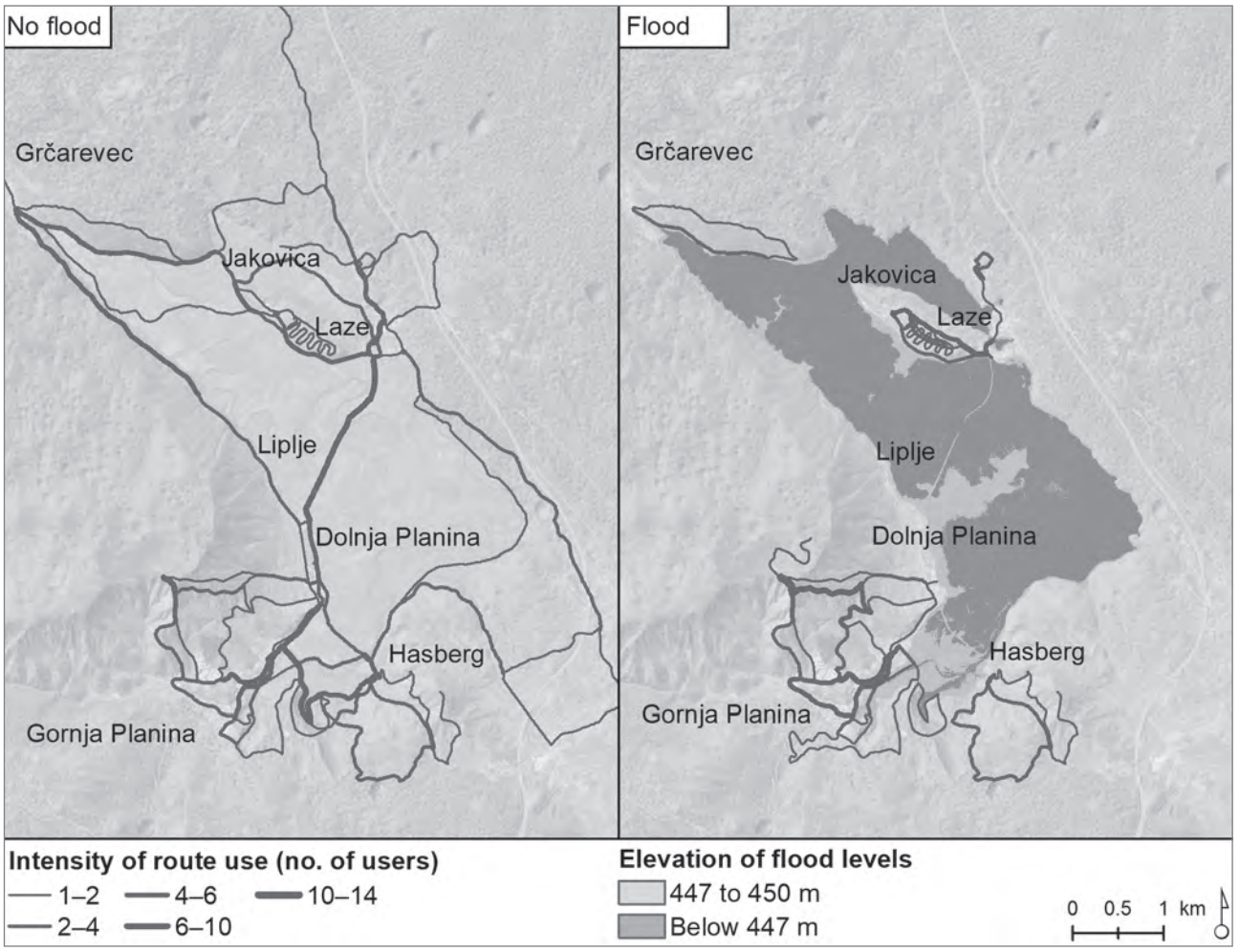

Figure 7: Comparison of intensity of using routes for walking and hiking during flooding and when the karst field is dry (map by: Simon Koblar; source: Geodetska uprava Republike Slovenije, 2017, 2018).

ticular, residents of Laze drive to the other side of the karst field (using the road from Laze to Ivanje Selo) to reach paths in the Hasberg Castle area. Interestingly, the paths between the fields in the bottom of the karst field leading to the river are not used for recreation, not even when the bottom of the karst field is dry.

However, there is a plan to provide visitors with a nature trail connecting various interesting parts of the karst field. Many parts of this planned trail cover routes that locals often use for recreation (in the southwest corner of the karst field), but it also includes a route toward the Unica River, which none of the sample uses as part of a daily routine. Even though this part of the planned trail remains dry during usual flooding, it has not been a popular daily recreation route. The rest of the proposed nature trail would usually not be accessible during flooding, but it is often used for recreation by locals. Empirical knowledge gained through a user-centred module may help in re-examining any existing or planned routes.

With these sets of small and qualitative data oriented toward users, space, and time, advanced GIS analysis makes it possible to study various temporal settings and also to comment on the usability of a place from a time-scale perspective. For example, in the case at hand, the frequency of route use is highest in the afternoon regardless of whether it is a weekday or weekend. During the week, this usage interval is slightly later, between 3.30 pm and 6.00 pm, whereas on the weekend people go out after lunch, between 1.00 pm and 3.30 pm. Thus, for example, behaviour maps originating from the user-centred module can show which routes are in use and how intensively during any particular section of the day.

Finally, the module makes it possible to study user profile characteristics in relation to engagement with places of interest; that is, it is possible to determine locals' recreational habits in the flooded karst field as well as when the karst field is dry. For example, people engage in recreation in their local area, and they may stay for a short time (thirty minutes) or go for

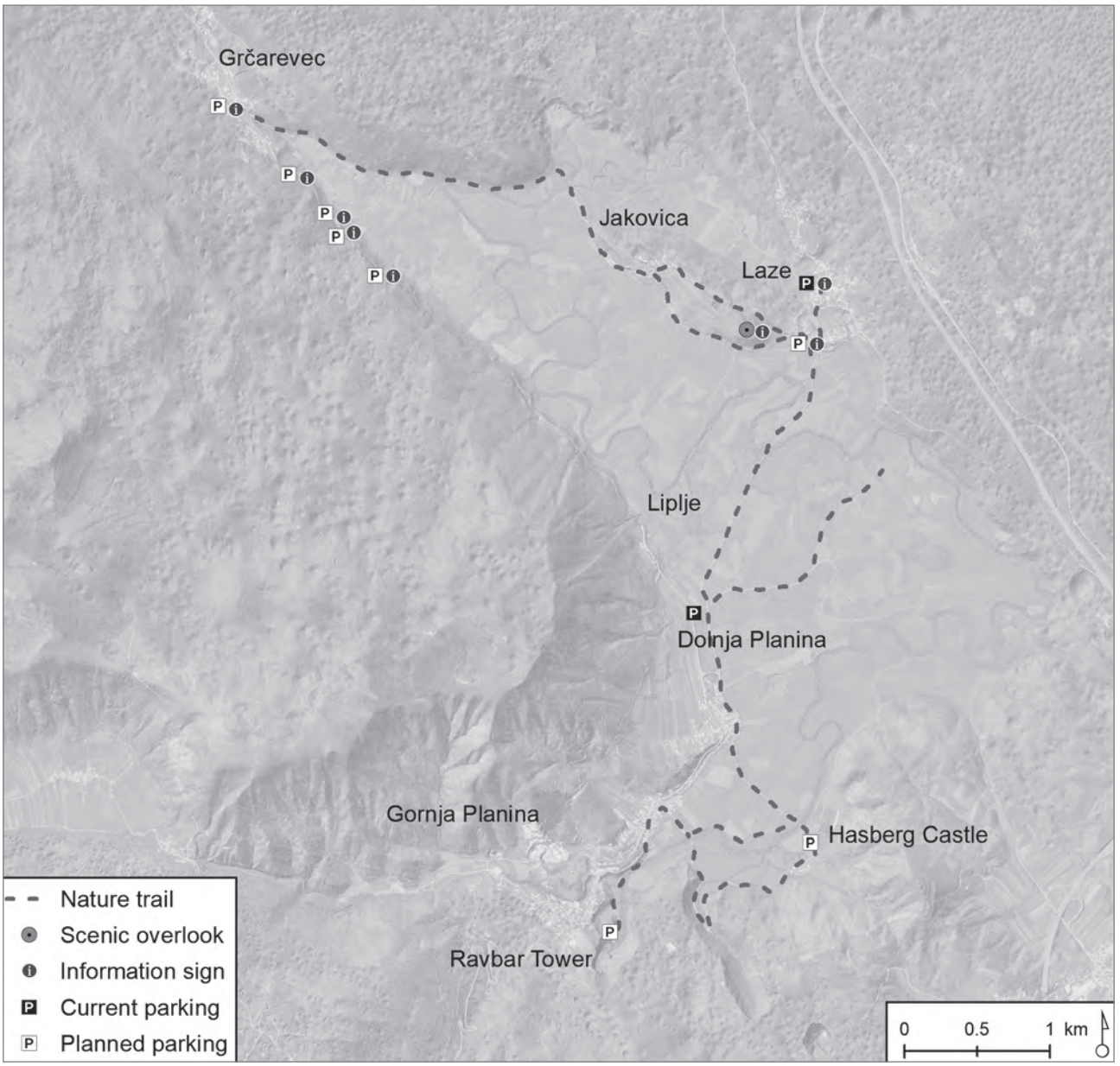

Figure 8: Plan for a nature trail in the Planina Karst Field (author: Simon Koblar; source: Notranjski regijski park, 2018).

a longer walk or hike (up to three hours), which means that in their local area they may walk from 1 to 10 km. Comparative analyses of daily routines as an analytical tool may show how people modify their recreational walking during flooding; for the planning process, the daily routine approach can help address spatial capacity and may be useful as a valorization tool for decision-making. For this particular case, the user-centred module showed that flooding has no influence on walking or other recreational routines for only two of nineteen people that hike or walk for recreation.

While setting up the module, considerable attention was paid to parts of the questionnaire designed to acquire explanatory data, including data on levels of threats and damage connected with floods, experience with and attitudes toward floods, and causal relations between human activity and water dynamics as understood by the respondents (Sections 3 and 5). What emerged from this indigenous or place-based knowledge acquisition exercise is, first, information about a range of different situations occurring in a relatively small space. Furthermore, the hypothesis could be confirmed that people living in areas exposed to frequent flooding take this as an inherent feature of their living environment and include floods as a normal event in their everyday life and routines. In addition, a wealth of information could be obtained; for example, on former and current uses of the area, and on how individuals and the community have spontaneously adapted to flooding. Given the structure of the group interviewed, it did not seem relevant to

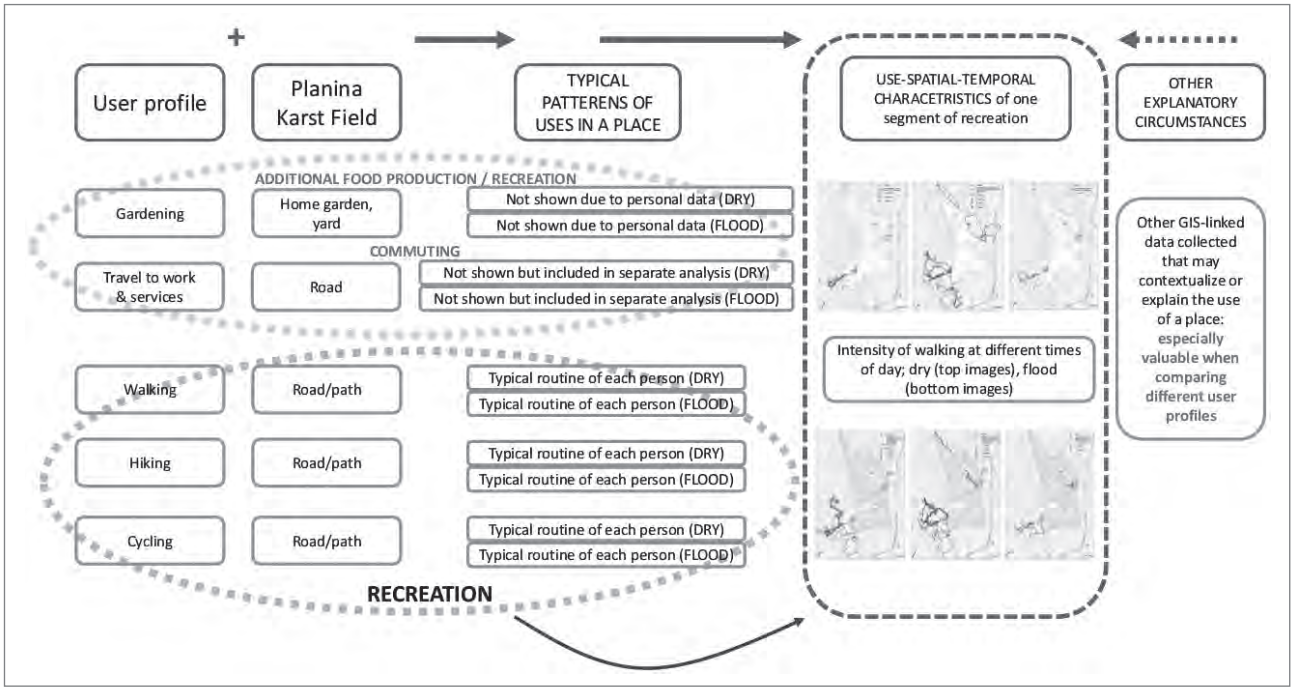

Figure 9: Steps taken in gathering and interpreting data for spatial-temporal representation of daily routines (illustration: Barbara Goličnik Marušić).

try to connect the results with specific user groups, but instead to treat them as general input for studying relations between people and a natural setting.

4.2.2 Valorization of the module as a spatial planning analysis and interpretation tool

The module follows a clear concept, in which the spatial-temporal dimensions of human residence are followed. It is built on the premise that such information is crucial for responsible and sustainable planning, exemplified by addressing flood-related issues. The user-centred module allows the acquisition of detailed (small, soft, and qualitative), content-related, and process-related data in a bottom-up manner. It follows a protocol including implementation methods and techniques, and it allows repetitive steps in any location of interest.

When applying the module, the capacity of spatial-temporal behaviour data (data related to daily routines gathered in questionnaire sections 2 and 4) had to be exploited first, and then cross-referenced with the package of explanatory data (questionnaire sections 1, 3, and 5). The steps taken to obtain the temporal spatial-use characteristics of the user-profile are shown in Figure 9.

Specific data gathered for a particular location have potential applicability for various steps at the local planning level. This article shows applicability for analytical phases or expert studies. However, the data may also be useful at a strategic level to form specific goals or as input for scenario building. By analysing temporal frameworks and spatial-use characteristics, it is possible to explore when, for how long, and with which intensity parts of an area are used and to speculate about various simultaneous uses of such a place. Thus, the module can address multifunctional landscapes. It can be used as a tool for identifying them or for assessing their potential (from a social point of view). In addition to its applicability potential in planning (e.g., in analysis, setting goals and visions, or developing strategies), the module concept can be a valuable tool for monitoring and analysis (i.e., comparing changes in usage dynamics before and after interventions). Indirectly, data gained in this manner can also be used at other planning levels, including regional or national. When original data collected bottom-up are properly generalized, they may serve as a basis for larger-scale planning and place local issues into a broader (spatial) context. Because daily routines are a central focus of the user-centred module, its concept may have a direct potential for mobility planning studies and implementation.

5 Conclusion

This article addresses the necessity of understanding, recognizing, and including the human dimension in a place as a relevant dynamic system in (flood-sustainable) spatial planning. The user-centred module introduces people's daily routines as relevant data for studying a dynamic system in a place where a process may influence or react to a natural dynamic system.

The approach does not promote the public participation concept as such, but instead the inclusion of rather small, soft, and qualitative data in the planning process to obtain as much insight as possible into interactions between the natural and human systems, which may help in managing or planning areas. It demonstrates the potential for generalizing this method based on bottom-up data collection. Finally, spatial planning processes and activities can provide useful solutions for real life. The proposed approach addressing relations in time and space at an analytical level proceeds from a real-life scale, and it therefore informs the planning process with actual relations and keeps the entire process well-grounded with the actual places and their (non)spatial characteristics. In addition to various concepts of public participation, concepts such as the user-centred module, which implement and represent peoples' notions about spatial phenomena as well as temporal-spatial dimensions of their activities in places, offer new opportunities and challenges for a different view on spatial planning practice in the future.

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Revitalizing cultural heritage buildings through cultural and creative industries: The Forget Heritage project

How is it possible to unleash the hidden potential of cultural heritage for improving people's quality of life and at the same time to create new opportunities and offer additional information about management to the cultural and creative sector? This question is addressed by Forget Heritage, a three-year Interreg Central Europe programme project. The main objective of the partner cities' cooperation is to identify innovative, replicable, and sustainable public-private cooperation management models for abandoned cultural heritage buildings and to give these historical sites added value by setting up cultural and creative companies.

The project tackles an issue present in most cities characterized by unused historical buildings that have marked the history of the local community in various ways. This is not about widely recognized "A list" cultural heritage buildings, but buildings such as former factories, hospitals, schools, or barracks, which are a backdrop and often invisible to the public eye. Now in a state of neglect, their historical memory is being forgotten. The functionality of such buildings is often limited. They are turning into urban voids and have a negative impact on surrounding areas. In each city, there are pressures to tear down such buildings and build new residential or business complexes in their place in the name of development. However, there is plenty of evidence that precisely such urban voids have the potential to become the major driver of development in a neighbourhood. Not only do blocks of smaller, mixed-age buildings add character and charm to cities, but these areas also provide a foundation for diverse local businesses and innovative startups. Whereas large new buildings provide suitable space for recognized companies that can afford it, older, modest, and unassuming buildings contain economic development engines of their own. The basic idea of the Forget Heritage project was built around Jane Jacobs's dictum "Old ideas can sometimes use new buildings. New ideas must use old buildings." Innovative ideas of any kind always bear quite a risk in their development stage, no matter how successful they ultimately are. Such ideas always need room for experimentation: room for trial and also room for error.

One of the characteristics of larger cities is also a higher concentration of the cultural and creative sector. The creatives are definitely a group that cities aim to attract; however, they need an affordable and flexible place to work in. The authenticity and character of historic (even if not very old) buildings presents an added value for them that is lacking in new ones. The project partners recognized the need of the creatives for a suitable and inspiring working environment, as well as various positive externalities (from social to economic) that derive from making such places available to the creatives. The Forget Heritage project therefore tries to identify such places and provide information and tools to help tap their hidden potential with the use of cultural and creative industries. At the same time, it tries to improve awareness and understanding among both major actors in this process, public administration and the creatives, and together

find economically sustainable models, test them, and establish examples that can also serve as an inspiration to other cities.

The information that will be gathered within the project through inclusion of various groups, exchange of experience, training, and research will be tested in eight pilot projects, and recommendations will be transferred to other cities. The pilot projects are very diverse in terms of content and space. They range from a multidisciplinary creative centre in the network of historical buildings in the centre of Genoa to an intercultural gardening project that integrates refugees and creatives in Nuremberg, for example. In Slovenia, the pilot project is running at the Vodnik Home, a local cultural heritage monument. In the now renovated and previously unused rooms on the first floor of the building, which was revitalized as premises for reading, writing, and storytelling, a new educational programme and the Writers' Hub was developed. Various writing workshops and mentorship programmes and other accompanying events are being held there, and authors have the opportunity to rent one of the four rooms in the shared working premises. The Writers' Hub programme is therefore perfectly in line with the programme of the entire building, where many links are ingeniously created through books with several other aspects of the cultural and creative sector – from the performing arts and artistic creation to music and cultural education.

In line with the goal of sharing information, one of the key tools created within the project is the Management Manual, which addresses both managers of cultural heritage buildings and decision-makers. The Management Manual was built based on international experience and fills the gap in the literature on entrepreneurial revitalization of cultural heritage. It represents a resource of practical necessities, structured approaches,

Figure 1: Project workshop (photo: Motovila).

and best-practice examples. The first part of the manual is oriented toward public administration. It contains recommendations for several challenges that public administration faces in managing cultural heritage buildings. The manual also offers information about how to set up new kinds of participative development (including bottom-up approaches) and what kind of tools have already proven to be effective in modern revitalization strategies.

The second part of the manual is intended for use by various revalorization initiatives and future cultural heritage building managers. A management model for cultural heritage revalorization projects is presented. Step by step, the model will guide managers through all important tasks and challenges – from shaping the idea and goals, to the financial plan and project timeline. The manual is a hands-on guide: it offers several practical examples and its appendices also contain worksheets that can be printed out and directly used as assistance for faster and better response to various management challenges. The manual is available in both Slovenian and English on the project's homepage as well as on the homepages of both Slovenian partners, the Institute for Economic Research and the Regional Development Agency of the Ljubljana Urban Region.

All other important documents created within the project are also available at these homepages. Based on previous local analyses of legislation and policies, the project partners prepared a policy handbook on revitalizing unused cultural heritage buildings in central European cities. In addition to an overview of national practices regarding the protection and reuse of cultural heritage buildings and relevant legislation at the local, regional, and national levels, this handbook also contains recommendations for improvements, and indicates certain opportunities and justifications for financially supporting revitalization projects. Another product of previous analyses in partner countries is also an analysis of transferrable elements of good practice in cultural heritage building management, which highlights some common key factors in various examples of successful management. Furthermore, in cooperation with the Department of Architecture and Design of the University of Genoa and the Culture Department of the City of Genoa, the project produced the document Guidelines for the Involvement of Citizens in Historical Sites Valorization. These guidelines were developed based on research and the findings of studies by the project partners. In addition to analysing current operating models, the guidelines also include a proposal for an operational scheme as

a working model to establish a plan for stakeholder involvement in cultural heritage revitalization. Within the work package, which focuses on training cultural heritage managers, free training sessions were held in all partner cities. In addition, a transnational training model for historical site management was prepared. This tool is intended for everyone responsible in order to provide an incentive for development programmes on training and skills development in managing underused or abandoned historical sites. Another important project tool that will be put into practice very soon is a web application. The application will have two major functions: on the one hand, it will make it possible to identify and record appropriate abandoned spaces in partner cities, and on the other hand it will allow feedback from residents and other stakeholders regarding the pilot projects and the use of other spaces.

After testing the tools developed in the pilot projects and evaluating the pilot projects through an interim and final assessment, a strategy for cultural heritage management through the use of cultural and creative industries will also be prepared.

The strategy will be endorsed by policymakers in the partner regions. After the Forget Heritage project concludes, the manager of the Vodnik Home will continue the activities developed within the project (the educational programme and the Writers' Hub). All the other pilot projects in the partner cities will also continue, and the knowhow created within the project will serve as an inspiration and platform for managing cultural heritage buildings in other cities. The project therefore offers several results that are also sustainable after the project's lifetime. Through revitalization of cultural heritage buildings, the project will directly increase the visual attractiveness of the cities and indirectly also the quality of life in them. Through preservation of history, the project will increase the sense of belonging to the community. Furthermore, it will also increase tourist flows and offer several opportunities to the cultural and creative sector, and, last but not least, it will stimulate the creation of new jobs, entrepreneurship, and economic growth.

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Information about the project and publications

Project homepage: https://www.interreg-central.eu/Content.Node/Forget-heritage.html

Institute for Economic Research: http://www.ier.si/menu-298.php

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Forrest, R. & Murie, A. (eds.) (1995) *Housing and family wealth.* London, Routledge.

Dimitrovska Andrews, K. (2005) Mastering the post-socialist city: Impacts on planning the built environment. In: Hamilton, F. E. I., Dimitrovska Andrews, K. & Pichler-Milanović, N. (eds.) *Transformation of cities in Central and Eastern Europe: Towards globalization,* pp. 153–186. New York, United Nations University Press.

Planning act 2008. Statutory Instrument, no. 2260/2009. London.

Office for National Statistics (2009) *Statistical yearbook 2009.* London.

Sendi, R. (1995) Housing reform and housing conflict: The privatisation and denationalisation of public housing in the Republic of Slovenia in practice. *International Journal of Urban and Regional Research,* 19(3), pp. 435–446.

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