

- Maria Stephan and Andrej Vckovski)
6. Logical consistency (Wolfgang Kainz)
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The book presents the results of several-years lasting efforts of the Commission for Spatial Data Quality in the International Cartographic Association to explain the terms becoming of topical interest after the appearance of new technologies. The development of digital technology has entailed the need for new definitions as starting points for adopting new, measurable standards in the quality of spatial data. Seven quality elements are described in the chapters 2 to 8, and the ninth chapter presents an effort to calculate a combined influence of a few most important elements (accuracy, resolution, completeness and consistency in spatial, temporal and thematic domain). In the last chapter the editors offer a projection of spatial data standard development using thereby numerous historical

comparisons. According to their words, this book is only an effort in examining and defining the elements of spatial data quality. The next step is finding meaningful methods for measuring each single element, and the final phase of including the data quality into digital technologies is the creation of methods for visualising the quality of the existing data. Each chapter ends in the list of competent references for the subject topic. At the end of the book, as well as in original edition, there is an index. The innovation and a very significant contribution of the translators is also the glossary with detailed explanations for more than 140 items connected with wide problems that this book is dealing with. Dražen Tutić, today a junior researcher in the Institute for Cartography at the Faculty of Geodesy received the rector reward for the translation of this book in 1997 in the class of the best written student works at the University of Zagreb. The Croatian geodetic public and profession will find in this book a series of good recommendations for defining the terms important for adopting new international standards needed for maintenance and exchange of spatial data recently gaining significance in out part of the world as well.

Damir Medak

Croatian Towns on Old Plans and Panoramic Views

Mirko Marković

With the book *Croatian Towns on Old Plans and Panoramic Views* that is presented to us in already recognisable, lavishly prepared special issue by the publisher AGM, its author Mirko Marković supplements the entity of critical presentation of Croatian cartographic material, considering first of all his previous monographs *Descriptio Croatiae* (1993) and *Descriptio Bosnae et Hercegovinae* (1998).

This time the author reached out for big format presenting cartographic material in exceptionally large extent (724 pages) and with a large number of references in the light that makes it an interesting material even for an average educated reader, and not exclusively a monograph intended for professional circle of experts, either in humanistic or natural sciences. The quality of cartographic illustrations, absolute legibility and colour printing, as well as the

quantity of 402 colour city plan and panoramic view reproductions, their layout and correlation with references make this aesthetically impressive work also a textbook material. As emphasised by the author himself in the foreword, the book is an effort to fill up the thematic emptiness in the homeland cartography offering thus a kind of contribution to interdisciplinary reconstruction of the past of 65 Croatian town by analysing the towns from the outermost north-east to the south of Croatia, including the towns belonging to the former Military frontier.

After the foreword the author presents in the introduction the work done so far on researching the old plans and panoramic views of Croatian towns. Further, in the historical perspective he analyses the following towns as special chapters on the basis of collected plans and views: Zagreb, Krapina,

domeni). U posljednjem poglavlju urednici daju projekciju razvoja standarda prostornih podataka koristeći pritom brojne povijesne usporedbe. Prema njihovim riječima, ova je knjiga tek pokušaj ispitivanja i definiranja elemenata kvalitete prostornih podataka. Sljedeći je korak pronalaženje smislenih metoda za mjerenje svakog pojedinog elementa, a završna faza uključivanja kvalitete podataka u digitalne tehnologije stvaranje je metoda za vizualizaciju kvalitete postojećih podataka. Svako poglavlje završava popisom mjerodavne literature za predmetnu tematiku. Na kraju knjige, kao i u izvorniku, nalazi se kazalo. Novost i vrlo značajan prinos prevoditelja je i rječnik s detaljnim objašnjenjima više od 140 pojmova vezanih uz široku

problematiku kojom se ta knjiga bavi. Dražen Tutić, danas znanstveni novak u Zavodu za kartografiju Geodetskog fakulteta, za prijevod te knjige 1997. godine dobio je Rektorovu nagradu za najbolje pisane studentske radove na Sveučilištu u Zagrebu. Hrvatska geodetska znanost i struka naći će u toj knjizi niz dobrih preporuka za definiranje pojmova važnih za usvajanje međunarodnih standarda za održavanje i razmjenu prostornih podataka, koji u posljednje vrijeme i na našim prostorima dobivaju na značenju.

Damir Medak

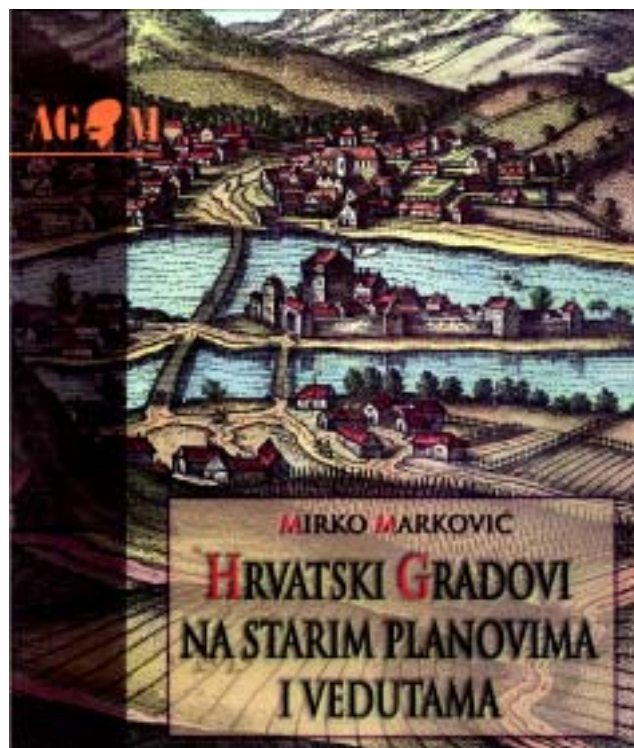
Hrvatski gradovi na starim planovima i vedutama

Mirko Marković

Knjigom *Hrvatski gradovi na starim planovima i vedutama*, koju nam u već prepoznatljivom, bogato opremljenom, posebnom izdanju predstavlja nakladnička kuća AGM, njezin autor Mirko Marković nadopunjuje cjelinu kritičkoga predstavljanja hrvatske kartografske građe, prije svega imajući u vidu njegove prethodne monografije *Descriptio Croatiae* (1993) i *Descriptio Bosnae et Hercegovinae* (1998).

I ovoga je puta autor posegnuo za velikim formatom, koji u iznimno velikom opsegu (724 str.) i uz zavidan broj referenci predstavlja kartografski materijal u svjetlu koje ga čini zanimljivim gradivom i prosječno obrazovanom čitatelju, a ne monografijom namijenjenom profesionalnom krugu stručnjaka, bilo humanističkih ili prirodnih znanosti. Kvaliteta kartografskih ilustracija, bezuvjetna čitljivost i tisak u boji te kvantiteta od 402 kolorirane reprodukcije plana i vedute, njihova preglednost i korelacija s referencama čine to estetski dojmljivo djelo i udžbeničkim materijalom. Kako i sam autor u predgovoru naglašava, knjiga je pokušaj da se popuni tematska praznina u domaćoj kartografiji i time ponudi svojevrstan doprinos interdisciplinarnom rekonstruiranju prošlosti 65 hrvatskih gradova analizom 380 izvornih planova i veduta. Tako rezultati kartografskog istraživanja postaju komplementarni rezultatima analize pisanog

arhivskog materijala. Pri određivanju redoslijeda autor je krenuo analizom gradova s krajnjeg sjeveroistoka do krajnjeg juga Hrvatske, uključujući i gradove u sastavu nekadašnje Vojne krajine.



Samobor, Varaždin, Koprivnica, Čakovec, Križevci, Ivanić, Bjelovar, Virovitica, Gradiška, Požega, Brod, Đakovo, Valpovo, Osijek, Vukovar, Ilok, Petrovaradin, Karlovac, Sisak, Petrinja, Dubica, Kostajnica, Zrin, Novi na Uni, Slunj, Cetingrad, Drežnik, Bihać, Banja Luka, Jajce, Ogulin, Modruš, Rijeka, Pula, Rovinj, Poreč, Pazin, Bakar, Senj, Karlobag, Osor, Krk, Rab, Pag, Otočac, Brinje, Gospić, Obrovac, Novigrad, Zadar, Vrana, Nadin, Šibenik, Skradin, Knin, Trogir, Split, Klis, Sinj, Makarska, Hvar, Korčula i Dubrovnik. After the conclusion there are abstracts in English and German, the list of used sources, reference list, list of plans and views, and two glossaries, one referring to geographic terms, and the other to personal names.

In the introduction there is a definition of old plans and views given, and the appearance and development of the first known individual graphic sheets or atlases is chronologically presented. The contribution of Croatian graphic artists, i.e. designers or surveyors is especially emphasised: Natale Bonifacio, Martin Rota Kolunić, Ivan Klobučarić and Pavao Ritter Vitezović. Apart from picture sources, the author includes in to this analysis also written sources from the 19th Century, as well as critically processed editions of sources from the 20th Century, either in the form of author works or proceedings. Marković correlates and favours graphic, i.e. cartographic documents to written documents enabling thus in a comparative analysis of topographic sources the placement of our towns into the central European or Mediterranean frames, which can be more difficult depicted from written documents. The city plans of old Croatian towns were made mostly by strangers, first of all the Italians in Istria and Dalmatia, and by Austrian military topographers in continental inland. Higher precision was resulting from surveying education and wider application of surveying instruments. The usage of measuring tools on plans introduced the third dimension into graphic presentations. Old plans and views present graphically the period of their development and urban formation, as well as of

fortification organising, especially after the borders had been changed entailing also the changes in political and cultural affiliation. Following the phases of adaptation, previous construction and later construction, the author correlates them with the principals of military architecture and attention that individual authority paid to them, as well as the construction continuity or discontinuity from Illyrian fortresses, through antique urban elements, mediaeval towns, military fortifications till the present day. The social importance of single localities has been changing by the introduction of new traffic routes, changing war strategies and jurisdiction of church centres, and it offers the bases also for demographic evaluations. It is thus evident that the Turks have favoured older military strategy, i.e. numeric superiority to the significance of plans and maps being modern European strategic military factor. And fortifications varied, depending on geographic possibilities and strategic location advantages, so that in the continental plain the characteristic type of "Wasserburg" prevailed, and easily approachable settlements on the hill slopes were left in war situations.

In his conclusive considerations the author suggests practical application of plans and views as comparative material in historical and geographical analyses, architecture, urbanism, art history and conservation profession. He explains that with the fact that urban structures keep various social relationships, standard of life, i.e. material status of an owner, level of church social role that can be seen through church construction and application of specific principals of military strategy in military and fortification objects. Finally, the author apostrophises also the possibility of estimating the size of that social and historical, traffic, economic, religious, cultural or some other spatial role in the past on the basis of topographic presentations.

I warmly recommend the book to all those who deal with the different aspects of research of the Croatian towns history, especially civil engineering history and in general cartography.

Dubravka Mlinarić



Nakon predgovora, u uvodu autor izlaže dosadašnji rad na proučavanju starih planova i veduta hrvatskih gradova. Potom su, u povijesnoj perspektivi, na temelju prikupljenih planova i veduta kao posebna poglavlja analizirani sljedeći gradovi: Zagreb, Krapina, Samobor, Varaždin, Koprivnica, Čakovec, Križevci, Ivanić, Bjelovar, Virovitica, Gradiška, Požega, Brod, Đakovo, Valpovo, Osijek, Vukovar, Ilok, Petrovaradin, Karlovac, Sisak, Petrinja, Dubica, Kostajnica, Zrin, Novi na Uni, Slunj, Cetingrad, Drežnik, Bihać, Banja Luka, Jajce, Ogulin, Modruš, Rijeka, Pula, Rovinj, Poreč, Pazin, Bakar, Senj, Karlobag, Osor, Krk, Rab, Pag, Otočac, Brinje, Gospić, Obrovac, Novigrad, Zadar, Vrana, Nadin, Šibenik, Skradin, Knin, Trogir, Split, Klis, Sinj, Makarska, Hvar, Korčula i Dubrovnik. Nakon zaključka slijede sažeci na engleskom i njemačkom jeziku, popis korištenih izvora, popis literature, popis planova i veduta te dva kazala, jedno geografskih pojmova i drugo osobnih imena.

U uvodu je postavljena definicija starih planova i veduta te su kronološki prikazani pojava i razvoj prvih poznatih pojedinačnih grafičkih listova ili atlasa. Posebno je naglašen doprinos domaćih umjetnika grafičara, odnosno crtača ili mjernika: Natala Bonifacija, Martina Rote Kolunića, Ivana Klobučarića i Pavla Rittera Vitezovića. Osim slikovnih, autor u svoju analizu uključuje i pisane izvore iz 19. stoljeća te kritički obrađena izdanja izvora iz 20. stoljeća, bilo u obliku autorskih radova ili zbornika. Marković korelira i pretpostavlja grafičke, tj. kartografske dokumente pisanima, čime omogućuje u komparativnoj analizi topografskih izvora smještanje naših gradova u srednjoeuropske ili mediteranske okvire, što je teže uočljivo iz pisanih dokumenata. Vedute hrvatskih gradova radili su većinom stranci, ponajprije Talijani u Istri i Dalmaciji, te austrijski vojni topografi u kontinentalnoj unutrašnjosti, a većoj je preciznosti pogodovala zemljomjerna obuka i šira primjena mjerničkih instrumenata. Uporabom mjerila na planovima unosila se nova dimenzija u grafičke

prikaze. Stari planovi i vedute gradova grafički predočuju etape njihova razvoja i urbanističkog uobličavanja kao i fortifikacijskog organiziranja, posebno nakon promjena granica, a time i promjene političke i kulturne pripadnosti. Prateći faze adaptacije, pregradnje i dogradnje autor ih korelira s načelima vojne arhitekture i pozornosti koju im pojedina vlast pridaje, kao i graditeljskoga kontinuiteta ili diskontinuiteta od ilirskih gradina, preko antičkih urbanih elemenata, srednjovjekovnih gradova, vojnih fortifikacija do danas. Društvena važnost pojedinih lokaliteta mijenjala se uvođenjem novih prometnica, mijenjanjem strategija ratovanja ili jurisdikcije crkvenih središta, a pruža osnove i za demografske procjene. Tako je evidentno da su Turci pretpostavljali stariju vojnu strategiju odnosno brojčanu premoć važnosti planova i zemljovida, kao modernom europskom strateškom vojnom čimbeniku. I fortifikacije su varirale ovisno o geografskim mogućnostima i strateškim smještajnim prednostima, pa je u kontinentalnoj nizini prevladavao karakterističan tip *Wasserburga*, dok su se lako dostupna naselja na obroncima u ratnim situacijama napuštala.

U zaključnim razmatranjima autor sugerira praktičnu primjenu planova i veduta kao komparativnog materijala u povijesno-geografskim analizama, arhitekturi, urbanizmu, povijesti umjetnosti i konzervatorskoj struci. Obrazlaže to činjenicom da urbane strukture odražavaju raznorodne društvene odnose, životni standard, odnosno materijalni status vlasnika, razinu društvene uloge Crkve vidljivu kroz crkveno graditeljstvo te primjenu specifičnih načela vojne strategije reflektiranu u vojničkim i fortifikacijskim objektima. Konačno, autor apostrofira i mogućnost procjene veličine te društveno-povijesne, prometne, gospodarske, vjerske, kulturne ili koje druge uloge prostora u prošlosti na temelju topografskih prikaza.

Knjigu preporučujem svima koji se bave različitim aspektima istraživanja prošlosti hrvatskih gradova, posebno graditeljstvom te kartografijom uopće.

Dubravka Mlinarić

