Empowering the Visibility of Croatian Cultural Heritage through the Digital Humanities

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Edited by

Marijana Tomić,
Mirna Willer
and Nives Tomašević

Cambridge
Scholars
Publishing

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This book first published 2020

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

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This book is dedicated to the memory of mons. Pavao Kero, the guardian and researcher of Zadar Glagolitic heritage and *spiritus movens* of Zadar Glagolitic Circle.

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FOREWORD

This volume has been shaped by the challenges faced and questions posed within the international scientific project *Digitization, bibliographic description and research of texts written in Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and Šibenik area* (*Written heritage project*) conducted by the Department of Information Sciences of the University of Zadar, Croatia and Vestigia Manuscript Research Centre of the University of Graz, Austria. The project goals include digitization and bibliographic description of Croatian Glagolitic manuscripts collections, as well as the research in several humanities areas, such as philology and history, particularly in concordance within the digital humanities framework. Furthermore, the project aims include building of infrastructure for (cooperative) research of written heritage in digital environment, and promotion of contemporary models of written heritage communication. The special aim of the project is to act as a laboratory for university students and scholars' research of written heritage, especially manuscripts and old and rare books.

The *Written heritage project* acts as a vivid platform for discussions among prominent international scholars coming from (digital) humanities and information sciences. All kind of general questions concerning digital humanities, digitization of cultural heritage, and description and visualization of data on cultural heritage are questioned and discussed. These discussions and their conclusions are reflected in this volume. Consequently, the aim of this volume is to bring together refereed papers covering topics on the contemporary cultural heritage research framework within the field of digital humanities from the aspect of description and access to cultural heritage and digitization of cultural heritage in general, and Glagolitic and Latin written heritage as a source for historiographic and linguistic research in particular. It also brings together papers on research methods in humanities, and on digital humanities education.

The first chapter gives a short overview of the *Written heritage project*, while the rest of the book is organized in seven topics, each questioning one of the important research areas within digital humanities framework: (1) *Digital humanities as a contemporary cultural heritage research framework*, (2) *Description and access to cultural heritage: conceptual models and standards*, (3) *Digitization of cultural heritage*, (4) *Glagolitic*

and Latin written heritage as a source for historiographic and linguistic research, (5) *Literary studies*, (6) *Research and communication of cultural heritage*, and (7) *Education in the field of Digital Humanities*. Particular emphasis of the volume is placed on the presentation of methods and results of research of cultural heritage, especially written heritage, namely manuscripts, but also on the research in art history, linguistics, classical philology, etc.

In the context of reflection on the future of research in the field of humanities, starting from the tradition of the University of Zadar, Croatia, the aim of this volume is to present research methods and tools used in humanities research in order to identify main research approaches and areas of cooperation within the humanities and between the humanities and other scientific fields, and to provoke further discussions on the need to develop institutional or cross-institutional centres for digital humanities and university education in the field.

Marijana Tomić, Mirna Willer and Nives Tomašević

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CHAPTER 1

"PISANA BAŠTINA" (WRITTEN HERITAGE)[1]- A PROJECT OF DIGITIZATION OF GLAGOLITIC AND OTHER MANUSCRIPTS IN THE REGION OF ZADAR/CROATIA

ERICH RENHART

Introduction

The following contribution relates to a project on the digitisation of manuscripts that has been ongoing since October 2016. It describes the project's beginnings, the immediate steps which led to its realisation, as well as the concrete execution and some of the connected questions arising during the process. Finally, the significance of the project is underscored. The project is the fruit of years of ongoing collaboration between two university institutions, the Department of Information Sciences at the University of Zadar, Croatia[2], and the research institution "Vestigia – Manuscript Research Centre" (Centre for the Research into Book and Written Heritage)[3] at Karl Franzens University, Graz, Austria. The cooperation between these two universities led to a partnership agreement in 2009 which established a more formal framework for collaboration.[4]

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[1] The full title of the project is *Digitalizacija, bibliografska obrada i istraživanje tekstova zadarsko-šibenskog područja iz razdoblja do kraja 19. st. pisanih glagoljicom, bosančicom i latinicom* [*Digitization, bibliographic description and research of texts written in Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and Šibenik area*].

[2] Odjel za informacijske znanosti, Sveučilište u Zadru, accessed March 17, 2019, http://iz.unizd.hr/o-nama/djelatnici-i-suradnici [Department of Information Sciences, University of Zadar, Croatia].

[3] *Vestigia*–Manuscript Research Centre, accessed March 17 2019, https://vestigia.uni-graz.at [Centre for the research into book and written heritage].

[4] The contract was signed on June 5, 2009 by the rectors of respective universities.

The project activities were placed in the hands of the two proponents; Marijana Tomić (Zadar) and Erich Renhart (Graz). Numerous common activities ensued: joint summer-schools, guest residencies of students and teaching staff, teaching exchanges, participation in symposia, and joint publications.[5] After the successful conclusion of the Utrecht Network Summer School on "Hidden Libraries",[6] in Graz, in June 2014, we agreed to develop a joint project to launch the systematic digitisation of historic manuscripts in a specific place in Croatia.

Concrete beginnings

This extensive project reached its final draft, including all necessary ramifications, around the end of 2015, an achievement for which the initiator and project director Marijana Tomić was responsible. Two dozen people declared their interest in participating in this project. Furthermore, a substantial number of collections from the region were ready to open their doors to this digitisation endeavour, an attitude that is worthy of note. The next step was the practical implementation of the project. An important step for the realisation of the project was the contribution by the Vestigia Research Centre of a "Traveller TCCS 4232"[7] digitisation unit, which was initially provided on loan for the duration of two years. With this, the project could access a tool which would prove very useful. In March 2016, the unit was transferred to the University of Zadar. At the same time, the University of Zadar purchased a computer and a camera.[8]

This was followed by a period of technical trials. After an initial general introduction by Manfred Mayer, in Graz,[9] the first independent digitisation trials were undertaken in Zadar. These first tests did not, however, follow any specific system. This was soon to change after the end of the academic summer break.

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[5] Erich Renhart, "Eine Spurenlese in alten Büchern und Bibliotheken," in *Bericht aus dem Forschungszentrum Vestigia 2005/06-2015* (Graz: Vestigia, 2015), 57-62.
[6] *Hidden Libraries*, last modified March 17 2019, www.hiddenlibraries.at; archived under www.vestigia.at.
[7] Information available at: https://vestigia.uni-graz.at/de/arbeitsbereiche-projekte/technologieentwicklung/der-traveller-tccs-4232/
[8] Type Canon EOS 70D.
[9] DI Manfred Mayer is the head of the Department for Book Restoration and also the designer of Vestigia's digitisation equipment.

The project is gaining momentum

We might call it a targeted coincidence that the author of this report was invited by the University of Zadar for the duration of an entire year. This provided ample opportunity to move the digitisation forward.

First, it was decided which collection the work should begin with. The Archdiocese Archive was chosen, and we were greeted there, not only by friendly and congenial people, but also with ideal working conditions, in terms of heated rooms, power connections, and ample space to handle the manuscripts. Don Pavao Kero, the director of the Permanent Collection of Church Art of Zadar and the keeper of this archival department, works personally with this collection of over 400 manuscripts. He has spent more than four decades assembling and appraising the church registers, fraternity books, and other volumes, from the whole archdiocese.[10] They are all in Glagolitic script,[11] with only a small section written in Latin script and language or Italian (Figure 1-1). The collection has been well cared for over the years in terms of conservation, and is in very good condition today.

From the collection, which is organised by places of origin of the manuscripts, we chose the nine codices from Kali.[12] These are quite slender, not too voluminous, manuscripts; church registers and fraternity books. We intended to start with objects that did not present us with any special circumstances, and which would be easy to digitise.

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[10] Don Pavo Kero has compiled a descriptive catalogue of the Glagolitic codices of the Archdiocese of Zadar that is now available in its second edition: Pavao Kero, *Popis glagoljskih kodeksa Zadarske nadbiskupije* (Zadar: Stalna izložba crkvene umjetnosti, Sveučilište u Zadru, 2015).

[11] The Glagolitic (also "glagoliza" and other spellings) is a script which is said to have been developed around 863 A.D. by the monk Cyril in Thessaloniki specifically to render Slavic idioms. It is present in a round and an angular variety. The latter can be found along the Dalmatian coast, right up to Istria. In later manuscripts, cursive styles are frequently found.

[12] Kali is a small fishing town on the island of Ugljan, just opposite Zadar from where it can be reached by ferry in twenty minutes.
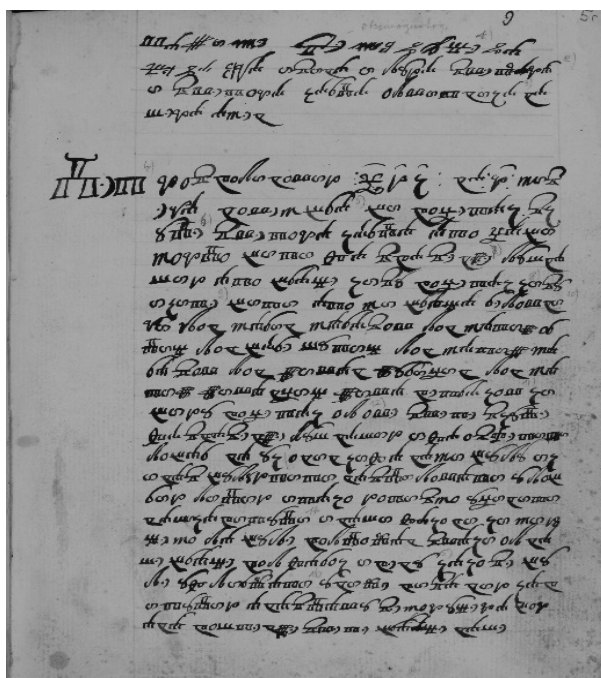
Figure 1-1. Text sample of a decorative Glagolitic script from the end of the 17th century (HR-DAZD, Sali 45.15, fol. 5r)

However, matters soon turned out not to be difficult, but nevertheless complicated. This had to do with the peculiarities of both the collection and the objects themselves:

- The individual manuscripts had no consecutive numbers. They also had no inventory numbers. There were only notes of the place of origin, written on the covers, or on labels attached to them. This made the unique identifiable designation of the objects difficult.
- Inside the manuscripts themselves, there was a variety of numbers indicating pages or leaves: paginations and foliations, double and triple numbering, inconsistencies of every variety (omissions, double-counting, false counting, different counting sequences for the same object, etc.).
- A large number of the manuscripts had pages, slips, even whole quires, which had been stitched in, glued in, or often just loosely inserted. Most of these remained unpaginated.

- The book restorers of past decades often started out by separating more voluminous tomes into individual fascicles, and rebinding them separately. During this work, they often added many empty sheets, evidently to provide additional body to the newly created books whose linen-covered cardboard covers sometimes proved thicker than the few sheets of paper they contained. No restorers' records were kept to document this type of work.

All these circumstances had to be taken into account during digitisation, and a way had to be found quickly to deal with this diversity. We had to establish conventions.[13]

These had to encompass *a priori* the following areas: a protocol for each manuscript, the work sequence, the naming of all parts of the manuscript, and the naming conventions for the digital files.

Protocol. Right at the start, we agreed that it would be vital to compile a kind of protocol for each manuscript, very concisely, containing the specifics about pagination, adliga, etc. This protocol would be used as a 'scenario/script' during the subsequent digitisation (for example, when 40 consecutive empty and unpaginated pages were not digitised; this would subsequently have to be filed with digital images).

Workflow. A description of the sequence of work established the individual steps, from preparatory measures (e.g., setting up equipment, putting out the objects and getting the room ready); the generation of digital signatures and protocols; the photographic record; the cropping of image files; quality control; saving data; and provision of data for the database.

Parts of the book. An important point in this context was the naming of any pages and sheets within the book that were written on, but did not form an integral part of the body of the book itself. Here, we introduced standardized abbreviations, such as 'f' (folium), 'p' (page) or 'r' (recto) and 'v' (verso), as well as descriptive sigla (e.g., 'C' = cover, 'PD' = pastedown, 'FL' = flyleaf) to enable a clear allocation of any page and its place within the book. Furthermore, we established a convention for how the countless loose slips of paper would be marked (using a pencil).

Naming convention for files. Finally, with the aid of the aforementioned sigla, we specified naming conventions for both files and folders. The names consist of two parts: a prefix to identify the book,[14] and the other

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[13] The purpose of these 'conventions' is also to document the criteria by which the individual steps are carried out in case someone other than the original persons working on the object needs to continue the work.

[14] This is made up of the first letters of the place of origin of the manuscript and a consecutive registration number, which had to be newly introduced and added to the

particulars clearly showing the place of the page within the book.

These conventions were comprehensively formulated in a number of editorial steps, and are made available as a document entitled *Principles of Work*.[15] Having clarified all of these, concrete work could now be tackled.

Digitization work

Marijana Tomić applied for funding for the project of making Glagolitic manuscripts in Zadar accessible, and was awarded financial support by the Croatian Ministry of Culture in 2016 and 2017. Using these funds, it was possible to gain four student assistants for this project. They received minimal employment contracts for the academic year of 2016/17 working on the digitisation of manuscripts.[16]

Initially, all participants received training concerning the expert handling of manuscripts, operating the 'Traveller' and the camera,[17] as well as following the workflow (Figures 1-2, 1-3 and 1-4). From the very beginning, the intention was to have everybody practice all steps of the process. To achieve this, students worked in pairs with changing team partners. This approach not only has the advantage that each team member is able to carry out every necessary job within the workflow; it also avoids creating victims of task-specific monotony, and should thereby help minimise mistakes. Naturally, in the beginning, the most sought-after task was to be the camera's 'triggerman', so to speak.

catalogue. This prefix also serves as the name of the digital data folder that holds the files for the book, e.g., Kali 20.1_means: the place name Kali, registration number 20 in the catalogue, of which this is book number 1. The prefix is also used for every individual image file and separated from further information in the file name concerning page or other details by inserting an underscore.

[15] Erich Renhart, and Marijana Tomić. *Principles of Work and Guidelines: Version 3.0*, accessed March 17 2018,
http://pisanabastina.unizd.hr/?object=view&id=12682.

[16] Žana Bobić, Laura Grzunov, Dajana Karlović, and Ira Pandža. This team was reinforced between October 2016 and June 2017 by me and my wife. At the start, there was a further team member; she was able to find full-time employment later.

[17] The introductory training in camera technology was carried out by Nikolina Peša Pavlović.

Figure 1-2. Digitising a manuscript using Traveller TCC 4232

Figure 1-3. Quality control: a time-consuming activity demanding utmost concentration

Figure 1-4. Practicing further steps: image editing and naming of files. To the right in the picture: project manager Marijana Tomić

Meanwhile, however, everyone has become practiced in the tedious activities of cropping images, naming them, and cross-checking them against the originals. A certain confident routine has established itself. By now, dozens of manuscripts have been digitised and tens of thousands of image files created and verified, all in an atmosphere of team spirit and with a good measure of humour.

Generation of metadata

As anyone familiar with this business knows only too well, digitizing alone is only half the battle. We could rather say that digitisation is able to produce data on a grand scale, and at a great speed, often causing metadata to lag behind. This project is no exception. Nevertheless, it was already part of the initial plan to not only generate data, but also implement them into a database to make them visible and accessible, not only to the scientific community, but also well beyond it. It was therefore a stroke of luck that the driving force of this project, Marijana Tomić, happens to be passionate about cataloguing. In parallel to data generation, she is working on generating professional metadata in close cooperation with IT experts.[18] The

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[18] First and foremost, here is Kristijan Crnković, a director of ArhivPRO company, responsible for the platform called Indigo. This platform supports the presentation of different kinds of digitally recorded cultural heritage. See also: www.arhivpro.hr.

needed metadata can, for the most part, be extracted from the catalogue of Pavao Kero.[19] Additional data, especially codicological details, will have to be gained from studying the original manuscripts. At the end of May 2017, the first sets of comprehensive catalogue entries were presented in a beta version.

Digital recording of watermarks

As soon as we were shown the first manuscripts, in early October of 2016, the many blank pages became immediately obvious; all of them showed beautiful watermarks easily visible to the naked eye. This gave us the idea of delving into some research about the papers used, as we thought it might be fascinating to see where the different parishes, not only those on the tiny islands of the Zadar Archipelagos, got their paper from. We started this specialized area within our research project on the documentation and study of watermarks, and found that there is hardly any research on the topic in Croatia today, and generally a great lack of literature on the subject.[20]

Analysis of watermarks (Figure 1-5) gives the great advantage of the fact that all manuscripts are clearly dated, even if they consist of different layers, and subsequently varying papers. On the other hand, the papers are relatively recent (late 16th to 18th century), just predating autochthonous paper production. There are hardly any reference books or data sets available on these later papers. A systematic study of the history of paper in Croatia is still lacking today, and there is very little mention elsewhere in literature.

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[19] Of course, their presentation in a printed catalogue makes them non-transferable to an electronic catalogue. They need to be re-entered into the field structure of the database. The person carrying out this data entry (transfer and new addition of data) must absolutely be able to read Glagolitic.

[20] The foundation for watermark research in Croatia was laid by Vladimir Mošin, *Vodeni znakovi XIII. i XIV. vijeka*, ed. by Vladimir A. Mošin, and Seid M. Traljić (Zagreb: Izdavački zavod Jugoslavenske akademije, 1957).
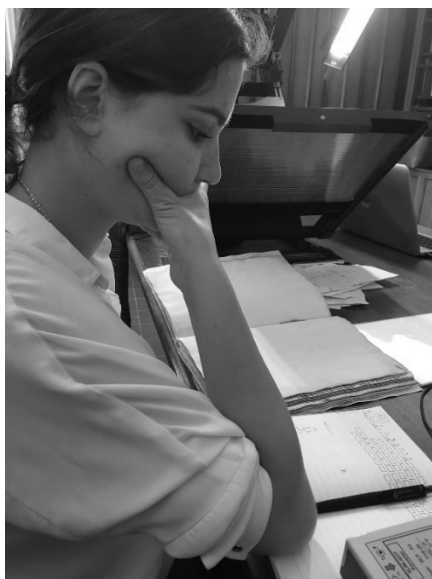
Figure 1-5. In the process of codicological registration of a manuscript, analysis is an important pre-requisite for the documentation of watermarks.

Figure 1-6. The carefully executed delicate water mark in a manuscript from Kali

We then drafted an outline of the project, which was followed by some introductions to watermark research, including practical exercises (Figure 1-6). To facilitate photographic documentation, a slim, light, foil was purchased. One of the students will devote her entire master's thesis to these watermarks. The goal we wish to accomplish is the documentation of different historic papers according to international standards, with the help of these watermarks, and, as far as possible, to carry out a classification and interpretation of the material. This partial project was launched in October 2017.

On the significance of the digitisation project

Digitisation is a popular catchword in the western world these days, and tops the agendas of many large companies and institutions, often as part of their efforts to save money. It seems to be an omnipresent buzzword. This diagnosis, if it can be considered generally as factually true at all, does not apply to all areas of society or all European regions; in the Balkan region it certainly only applies to selective cities. Providing digital access to historic documents is by no means a given, even in affluent countries.

The project for the digitization of manuscripts based in Zadar is of great importance on a number of levels: local, regional, national, and beyond the national borders of Croatia:

- **Local**: Maybe the best material to show the local importance of digitization is the old church record books and fraternity records. These were kept until well into the 20th century, and feature personal names that can still be found in local families today.[21]
- **Regional**: The systematic digitization of Glagolitic manuscripts in Zadar comprises all volumes collected in the Archive of the Archbishop. We are thus not simply dealing with individual documents, but rather with relevant written documents for the whole region. During our nine-month stay in Zadar, and our weekly presence in the archive, we received a number of digitization requests from other places (Rab, Murter, Biograd na Moru, even the city of Split, which is quite a distance from Zadar, showed an interest). Unfortunately, we were not able to meet all these requests.

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[21] This was clearly visible at an event on May 7, 2017 in Kali. On this day, the exhibition on Glagolitic culture was opened there, and in the evening, a digital heritage of manuscripts from the town was presented to the public in the town hall, which reached full capacity.

- **National**: The project also received some attention on the national level. Of course, it is not the only digitization project in the country, not by a long shot. However, it is of significance for the whole of Croatia, since it relates to more recent documents in this style of writing which is typical for Croatia, and thus makes an important contribution to better accessibility of this characteristic national heritage. It also provides a signal for other places around the country to follow suit. The financial support provided by the Ministry of Culture is also an important sign of this national recognition.
- **International**: Even in its first draft, the project set out an international board, from Lithuania to Malta, and even the USA. As the practical project unfolded, it met with international interest. The town of Bihać in Bosnia-Herzegovina was keen to know more about our digitisation efforts and is planning to carry out a similar project in their local archives and collections.[22]

No matter what angle you take when assessing the project to digitize the Glagolitic manuscripts in the region of Zadar and Šibenik, there is a growing realization that the data and documents produced will enable the fostering of one main element: identity. This digitisation makes a substantial contribution, enabling the enrichment of identity by accessing historic documents written in an alphabet that is used exclusively in this region. This is all the more important since the wars of the past have eradicated much of what a society relies on for its social and cultural life. Of course, this new asset may also be abused in the same context, for purposes of nationalist overemphasis in the manner already found in 20th century history books.

Digitisation and the public perception

While the digitisation itself is carried out in the relative secrecy of a small room behind closed doors,[23] its output is definitely destined to be received by the general public and the scientific community. A number of activities have been planned and carried out to this end:

- 1st International Symposium *Creative Potential of the Glagolitic*

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[22] A very active proponent is Don Slavo Grgić, who completed his doctorate in Bosnia and Herzegovina with a thesis on archival studies.
[23] In the end, any digitisation project, including the present one, always has to involve the *de facto* handling of historically unique exemplars, calling for adequate and extensive security measures.

Heritage, held on October 24 2016.
- The presentation of the digitized manuscripts of Kali on May 17 2017: presentation of the project, introduction of the website, public discussion, and virtual exhibition.[24]
- All data are publicly accessible via the project's website, as of May 2017, at http://pisanabastina.unizd.hr/.
- On May 29 2017, an evening event on written heritage was held at the church of St. Donatus at the Forum Romanum in Zadar. A captive audience filled the church, as the project was presented in a cultural and artistic setting, with some passages from manuscripts set into the scene, bringing these historic documents to life in a wonderfully atmospheric setting, with perfect acoustics.
- 2nd International Symposium *Digital Humanities: Empowering the Visibility of the Croatian Cultural Heritage,* held on November 6 and 7 2017.

Apart from these events, the promulgation of the project through written media by means of reports and in mostly local news media also played an important role. Overall, this digitisation initiative clearly demonstrates the intention, and efforts made, to present results in a public forum, and invite academic discourse about them. The historic expressions in the form of Glagolitic manuscripts seem to be well able to attract the attention of a large number of culturally aware people, thus closing a historic circle, with digitisation assuming the role of something akin to a midwifery service in the process.

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[24] *Kaljski glagoljski rukopisi. Izložba u povodu 300 godina Bratovštine sv. Križa Kali, 8.5.1717.-8.5.2017.* [The Glagolithic manuscripts of Kali. Exhibition 300 years of the Brotherhood of the Holy Cross in Kali, May 8 1717 to May 8 2017], accessed March 18 2018, https://pisanabastina.unizd.hr/kali/

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TOPIC I:

DIGITAL HUMANITIES AS A CONTEMPORARY CULTURAL HERITAGE RESEARCH FRAMEWORK

CHAPTER 2

RESEARCH POSSIBILITIES CREATED BY MAKING MANUSCRIPT IMAGES AVAILABLE ONLINE

GEORG VOGELER

Abstract

This paper discusses the direction research is taking in response to the availability of an increasing amount of digital images of manuscripts. It draws on the pluralistic model of text developed by Sahle (2013) and presents a draft of a pluralistic view on manuscripts as cultural heritage objects. It discusses palaeographical annotation, a hand-written text recognition project, computer vision methods applied to layout detection, and machine learning processes to classify documents in search for layout features, like decorations on medieval charters in the Illuminated Charters project. It concludes that human annotation and machine learning extend the scope of research with digital images of manuscripts, from a focus on the reproduction of visual appearance towards the perception of manuscripts as code bearing, meaningful objects.

Keywords: manuscripts, annotation, machine learning, palaeography, layout, illumination

Introduction

Creating digital images of heritage objects has become everyday practice for cultural heritage institutions. In general, they have four goals in this:

- to make cultural objects more widely available and easily accessible,
- to secure a place for cultural heritage in digital cultural spaces,
- to lower the barriers to use of the items, and

- to facilitate new scholarly insights.

The continued increase in the number of internet connections, by mobile devices in particular, is the technical foundation required to achieve the first goal. The publication channel 'internet' avoids the restrictions of opening hours, geographical distance, etc. It should suffice to create the digital images and publish them on the internet to make them more widely available and provide easier access. Many institutions are doing exactly this. As of March 2018, for instance, the Europeana counted 54 million cultural heritage objects available online via the channels of the project, i.e., via national and thematic aggregators – an increase of 2 million in only one year. As of late July 2018, the collection of medieval and early modern manuscripts in the Europeana contains more than 150,000 objects,[1] a keyword search for 'manuscript' returns 444,158 hits, and the controlled keyword returns 197,196 objects.[2]

With such a large number of images available, and a tendency towards open licences, images can become part of digital culture. Some numbers from major internet platforms addressing a general audience can demonstrate this: For the week of July 28 - August 4 2018, the 'manuscript' hash tag on Twitter returned about 35 tweets referencing images of ancient, medieval or early modern manuscripts. The 'Sexy Codicology' twitter channel, maintained by Giulio Menna and Marjolein de Vos, has more than 7,000 followers.[3] The sheer existence of an introductory video on the Glagolithic alphabet by the user 'Slavyansk' on YouTube has 5,600 views At the end of July 2018,[4] the effect of digital images in achieving the second goal listed above, including the 48 hits for the search term 'glagolithic manuscripts' on Pinterest, is demonstrated.[5]

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[1] https://www.europeana.eu/portal/de/collections/manuscripts, accessed August 1, 2018.

[2] https://www.europeana.eu/portal/de/explore/topics/17-manuscript.html, accessed on August 1, 2018.

[3] https://twitter.com/SexyCodicology, accessed August 1, 2018. The authors are active on general audience channels: Blog https://sexycodicology.net/, Facebook: https://sexycodicology.net/blog/about/, Google+:
https://sexycodicology.net/blog/about/ which announced 10,000 likes on July 11, 2016, Tumblr: http://sexycodicology.tumblr.com/, and Pinterest:
https://pinterest.com/SexyCodicology with 1,742 followers.

[4] https://www.youtube.com/watch?v=PFAeVf8qCHQ, accessed August 1, 2018.

[5] https://www.pinterest.de/search/pins/?q=glagolithic manuscripts, accessed August 1, 2018.

This paper focuses on the third and fourth goals mentioned above. It considers the effects of having a vast number of digital images of manuscripts available for research, and in particular, humanities research. This has two consequences: the first is that research possibilities have to be derived from humanities research questions and practices. Developing high-level algorithms and writing complex code is not part of this research tradition. Humanities researchers prefer to experiment with the products of cultural activities to demonstrate problems in existing assumptions, and thus create new insights into the meaning of the cultural artefacts. Digital methods must then accommodate this computational shortcoming in order to become digital humanities methods. The research possibilities have to be based on tools focussed on the object, i.e., the manuscript, and offer a set of functionalities facilitating existing research methods (search, read, select). It has to be easy to grasp how to use them, so the tools encourage experimental and explorative activities. Therefore, the following considerations will restrict themselves to the discussion of tools close to this ideal: Transkribus, monasterium.net, GIWIS, digipal, Ilastik, etc.[6]

The second consequence is based on the importance of theoretic proposals for humanities research. Thus, it is not enough to survey available resources or tools. Almas et al. have recently summarised the state of the art in manuscript studies in digital spaces.[7] As a result of a 2016 workshop, they point to the importance of sharing data and tools based on common standards. To approach the research impact of the digital tools, a pure list of successful research projects which used digital images in their domain-specific argument does not suffice. On the contrary, this paper starts with a theoretical consideration of the relationship between the digital image and the cultural heritage object itself. It is obvious that the digital image is only a surrogate for the object. This raises the question: what do digital images convey from their originals? I take as a point of departure the model of a specific cultural heritage object developed by Patrick Sahle in his work on digital scholarly editing,[8] as scholarly editing can be considered a good example for the scholarly creation of surrogates of cultural heritage objects. Sahle observed that the models developed in the history of scholarly editing

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[6] For more on information on each of these see the following footnotes.

[7] Bridget Almas et al., "Manuscript Study in Digital Spaces. The State of the Field and New Ways Forward," *Digital Humanities Quarterly* 12,2 (2018), accessed August 1, 2018,
http://www.digitalhumanities.org/dhq/vol/12/2/000374/000374.html.

[8] Patrick Sahle, *Digitale Editionsformen. Zum Umgang mit der Überlieferung unter den Bedingungen des Medienwandels*, 3 vols. (Norderstedt: BoD, 2013), (Schriften des Instituts für Dokumentologie und Editorik 7-9).

are driven by very different definitions of text:[9] editors can focus on the reconstruction of an abstract text passed down by chance in several copies, or they can study each physical object carrying the text as a document of the production or, in the case of copies, as traces of the use of the text. Some editors even consider translations as variants to be included in their evaluation. Therefore, Sahle suggests using a pluralistic model of text, in which the facets are addressed by different methods and technologies. Sahle distinguishes six major perspectives involving scholarly work, with:

- text as intention, content, meaning or semantics focused on the information told by the words (*text$_I$*);
- text as work, as a structure to build arguments and stories (*text$_W$*);
- text as a sequence of words and similar linguistic codes (*text$_C$*);
- text as a collection of graphemes, which can vary without changing the linguistic code (*text$_F$*);
- text as a physical object, a document (*text$_D$*);
- text as a visual object (*text$_V$*).

The model can be transferred to manuscripts in general, as they are highly important in scholarly editing. The perspectives *text$_F$*, *text$_D$* and *text$_V$* obviously focus on manuscripts. In spite of the overlap, the model has to be modified. As it is not the text conveyed by the manuscript, but the manuscript itself, which is the focus of the research, the model starts better with the conception of a generic cultural heritage object. Texts and manuscripts are, therefore, only special cases.

Figure 2-1 illustrates this proposal of how to generalise the model. Based on the specific perception, it transforms the linguistic code perspective into a focus on any kind of stable semiotic system. Manuscripts are not only a means to convey text, but can also carry images. Therefore, manuscripts as *manuscript$_C$* can convey a non-linguistic code like the iconography of the images they carry. Additionally, the feature set (*manuscript$_F$*) is not only defined by the characters forming a text, but also by page layout, the position of graphical and textual elements, and the design of a title page or cover. The perceptions of the manuscript as content (*manuscript$_I$*), and as structured work (*manuscript$_W$*), recede into the background when a manuscript is primarily perceived as an individual object. The model can emphasize that, on the contrary, it is very often non-textual information conveyed by the manuscript (as combination of authentic object with

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[9] Sahle, *Digitale Editionsformen* 2013, vol. III, 45-49, see also Franz Fischer, "All texts are equal, but.... Textual Plurality and the Critical Text in Digital Scholarly Editions," *Variants*, 10 (2013): 77-92.

written text on it), which makes it an object of research, as when empty covers of manuscripts appear in religious processions as signifiers of the whole.[10] A manuscript can serve as a record of artistic activity, e.g., in the Paul Klee lecture notebooks,[11] or in any sketch book, or philosophical idea, e.g., in the organisation of the paper slips in Ludwig Wittgenstein's notes from the 1930s and 1940s.[12] Thus, even an individual manuscript can be studied from the perspective of the content and work (*manuscript_{IW}*).
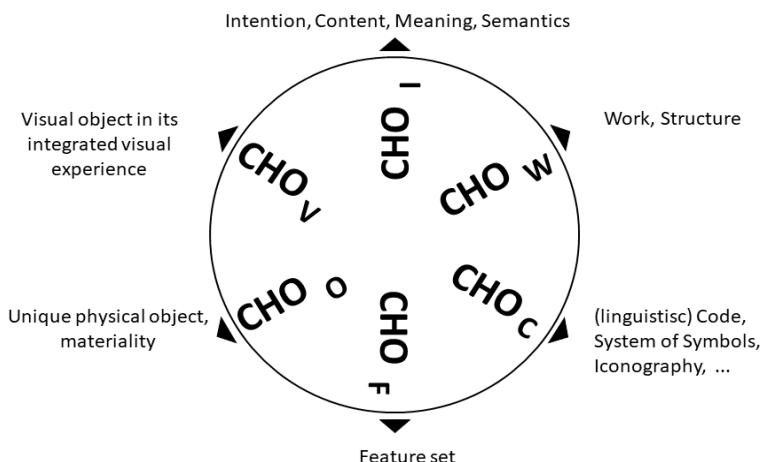
Figure 2-1. A pluralistic view of manuscripts as cultural heritage objects

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[10] Eyal Poleg, *Approaching the Bible in Medieval England* (Manchester: Manchester University Press 2013, Manchester Medieval Studies), in particular Chapter 2: "The Bible as talisman: textus and oath-books,", 59-107.

[11] Paul Klee, *Bildnerische Form- und Gestaltungslehre*, ed. by Fabienne Eggelhöfer and Marianne Keller Tschirren (Bern: Zentrum Paul Klee, 2012), accessed August 1 2018, http://www.kleegestaltungslehre.zpk.org.

[12] *"Wittgenstein Source Bergen Nachlass Edition,"* ed. by the Wittgenstein Archives at the University of Bergen under the direction of Alois Pichler, in: *Wittgenstein Source (2009-)* (Bergen: Wittgenstein Archive Bergen 2015), accessed August 1 2018,
http://www.wittgensteinsource.org/box_view_url_shortener?u=bG
http://www.wittgensteinsource.org/static_by_id/en/13?data-title=About%20BNE&data-verticalTitle=About%20BNE&data-type=&data-id=1418333557&data-boxTitle=About%20BNE&data-replaceContent=&data-url=%2Fstatic_by_id%2Fen%2F13 .

Each of these facets has obvious digital methods to represent it: the $manuscript_I$ is best described in data structures of relational or graph databases that contain digital representations of statements about the manuscript. The intellectual structure of the $manuscript_W$ is in the core of the logical structure in METS files, and many other XML based formats, such as TEI. Transcriptions focus on the linguistics, IconClass descriptions[13] on the visual codes of the $manuscript_C$. The location of text and images on a page form $manuscript_F$ and can be described by geometric shapes with Cartesian coordinates, as in IIIF canvas regions or TEI zones. 3D scans, X-Ray, reflectance-transformation-imaging photographs, and multispectral imaging, capture parts of the physical characteristics of the $manuscript_O$. Classical flat photographs reflect the $manuscript_V$.

This list of methods demonstrates that digital images of manuscripts cover a significant part of the $manuscript_{FS}$, i.e., the manuscript page as a flat surface with marks on it, and in a specific shape. We are accustomed to using these images to deduce physical information ($manuscript_O$) about the original, although codicologists often complain that their interests are not well-served by flat images.

Modern digital technologies shift the use of images towards the $manuscript_{FC}$ and create a new interpretation of the $manuscript_V$. Manuscript research, thus, will have to take into consideration that the computer is not only a machine to give a visual impression of the manuscript, to be accompanied by human-created metadata and transcriptions, but also a tool to find and analyse significant image regions, images of a specific visual type or text in the manuscripts, and a tool to be integrated into considerations of the meaning of the manuscript.

The shift described above is partially a consequence of the availability of images. They allow the creation of databases beyond the original manuscript. Digital metadata created by humans is not restricted to the identification of a manuscript, as it is in the case of a classical manuscript description. It becomes an annotation on the digital representation of the manuscript in images. Many research projects have already started with this kind of annotation: I would like to mention here the Scripta-database of Austrian scribal profiles by Alois Haidinger,[14] or the DigiPal-database of

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[13] Henri van de Waal et al., *IconClass* (Amsterdam: Rijksbureau voor Kunsthistorische Documentatie, 1973-), accessed August 1 2018,
http://www.iconclass.org/.
[14] Alois Haidinger, *scriptoria.at*, 2010-2018, accessed August 1 2018,
http://scriptoria.at.

Anglo-Saxon palaeography,[15] as they created a significant amount of data. As of July 8 2018, Scripta contains 5,151 images from 380 manuscripts and 81 fragments representing approximately about 1,400 changes in scribal hands, and identifies 169 individual scribes writing in several manuscripts, which provides a deeper insight into the library and scribal networks in Austrian monasteries.[16] DigiPal uses a rich descriptive ontology to annotate images by marking individual characters. As of July 2018, the database contains 63,880 characters from 1,675 manuscripts, attributed to 1,477 scribal hands. The database contains images of only 986 manuscripts. With the help of this resource, Peter Stokes could study 11th century English handwriting in detail, and Teresa Webber analysed the palaeography of Scottish royal charters.[17] Both databases focus on palaeographical research and contain data created identified by humans and illustrated by manuscript images. The Scripta database can serve as an example that this kind of database should consider annotation. The images are extracted from the digitisation activities in the libraries. Thus, the database links to their online publication. In fact, both databases would benefit in their reuse of existing images from the recently established international image interoperability framework (IIIF).[18] This standard for an application programming interface allows addressing fragments of images and organising images online

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[15] *DigiPal: Digital Resource and Database of Manuscripts, Palaeography and Diplomatic* (London: King's Digital Lab, 2011-14), accessed August 1 2018, http://www.digipal.eu/.

[16] Katharina Kaska, „Texttransfer und Buchaustausch: Netzwerke monastischer Handschriftenproduktion am Beispiel des Zisterzienserstifts Baumgartenberg in Oberösterreich," *Iter Austriacum*, Aug. 6 2017, accessed August 1 2018, http://www.iter-austriacum.at/kodikologie/texttransfer-und-buchaustausch-netzwerke-monastischer-handschriftenproduktion-am-beispiel-des-zisterzienserstifts-baumgartenberg-in-oberoesterreich/, or Alois Haidinger, and Franz Lackner, Projekt „Beziehungen zwischen den Skriptorien der Stifte Heiligenkreuz und Zwettl bis Anfang des 13. Jahrhunderts," Project report, 2016, accessed August 1 2018, http://www.scriptoria.at/publ/haidinger_2016NOE.pdf.

[17] Peter Stokes, „The Problem of Grade in Post-Conquest Vernacular Minuscule," *New Medieval Literatures*, 13 (2011): 23-47. DOI: 10.1484/J.NML.1.102438; Peter Stokes, "Rule and Variation in Eleventh-Century Minuscule Script," in: *Ruling the Script: Formal Aspects of Medieval Written Communication (Books, Charters, and Inscriptions)*, ed. by S. Barret, D. Stutzmann, and G. Vogeler (Turnhout: Brepols, 2016), 489-508. doi:10.1484/M.USML-EB.5.112447; Teresa Webber, "The Handwriting of Scottish Charters 1100-1250 in the National Library of Scotland," *Models of Authority*. Blog, November 25 2015, accessed August 1 2018, http://www.modelsofauthority.ac.uk/blog/handwriting/.

[18] *Image Interoperability Framework* (IIIF), accessed August 1 2018, http://iiif.io.

anywhere as an independent object. As the IIIF description follows the W3C standards on open annotation, and publishes the data in JSON-LD, the manuscript images become part of the W3C web of data. Digital images and manually created metadata evolve into a distributed online research environment, and the images themselves become part of very different approaches in manuscript studies. *Fragmentarium*, a database of manuscript fragments, which allow users to create collections and promotes the virtual reconstruction of separated material, is another example of the potential of the combination of descriptive databases and digital images.[19]

However, detecting the visual features in these databases is still a manual task, supported by an increasing range of tools for image annotation. Several manuscript-oriented resources make use of these tools to create databases of visual features. For example, monasterium.net, includes functionality to extract image parts and organise them into image fragment collections.[20] The users can manipulate images in several ways: they can modify saturation or contrast, or use more advanced filters like edge detection or 'embossing'. In the image editor it is also possible to create overlays of two image fragments to compare them more in detail.

But the extension of the use of digital images from manuscripts into the realm of manuscripts as text bearing objects goes even further, as computer vision methods and machine learning have reached a state in which automatic transformation of handwritten text into computer text (Handwritten Text Recognition, or HTR) are beginning to yield useful results. A major example is the recently published digital version of the French royal chancery registers in the HIMANIS project.[21] Machine learning, with deep neural networks trained on the partial edition of the

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[19] http://fragmentarium.ms includes for instance: *Bradford Gradual: Reconstructed Quire/Book*, identification by Richard Higgins (March 11 2018), accessed August 1 2018, https://fragmentarium.ms/overview/F-81my.

[20] *MOM-CA Wiki: Image manipulation* (last change August 19 2014), https://github.com/icaruseu/mom-ca/wiki/Image-manipulation, accessed August 1 2018.

[21] http://www.himanis.org, accessed August 1 2018. Dominique Stutzmann et al., "Handwritten Text Recognition, Keyword Indexing, and Plain Text Search in Medieval Manuscripts," in: *Digital Humanities 2018 Puentes-Bridges: Book of Abstracts Libro de resúmenes (Mexico City, 26-29 June 2018)* (Mexico-City: ADHO, 2018), 298-302; Bluche, Théodore, et al., "Preparatory KWS Experiments for Large-Scale Indexing of a Vast Medieval Manuscript Collection in the HIMANIS Project," in: *2017 14th IAPR International Conference on Document Analysis and Recognition (ICDAR)* (Kyoto: ICDAR, 2017), 311-316. DOI: 10.1109/ICDAR.2017.59.

registers by Guérin and Celier,[22] allows 'keyword spotting', i.e., the user can search for text which is compared to a table of image segments aligned with possible transcriptions of the words in the manuscript, and a probability of the transcription compared to the training data. With this automatically extracted data, the manuscript image becomes a digital representation of the text. The software designers are aware that the decision of the machine is different from a human decision. They base their software on statistics of feature distributions, and, therefore, give the user the possibility to tune the level of 'confidence' the machine-created model applies to the transcriptions. With a lower confidence threshold, users can enhance recall at the cost of precision. It is important to realise that this decision is not changing the algorithm for the identification, but only the relationship between the identification at a single spot compared to the overall statistics. The machine still 'sees' only the text of the manuscript compared to all the other manuscripts, and the transcriptions the identification model was trained on.

    Computer vision methods offer access to further information conveyed by the manuscript image: palaeographical judgement can be a purely visual task. Automatic writer identification from digital images is being heavily researched.[23] The current solutions applied to modern hand-written texts are not good enough to deal with early medieval papal charters.[24]

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[22] Paul Guérin and Leonce Celier, *Recueil des documents concernant le Poitou contenus dans les registres de la chancellerie de France*. 14 vols. (Poitiers: Société des archives historiques du Poitou 1881-1958), (Archives historiques du Poitou)

[23] See the contributions to the International Conferences on Frontiers in Handwriting Recognition (ICFHR) since 2002, and the International Conference on Document Analysis and Recognition (ICDAR), since 1991, which includes a workshop on historical imaging and processing since 2011: Bill Barrett, Michael S. Brown, R. Manmatha, and Jake Gehring (eds), *Proceedings of the 2011 Workshop on Historical Document Imaging and Processing, HIP@ICDAR 2011*, Beijing, China, September 16-17, 2011 (New York: ACM, 2011); Volkmar Frinken, Bill Barrett, R. Manmatha, and Volker Märgner (eds.), *Proceedings of the 2nd International Workshop on Historical Document Imaging and Processing, HIP@ICDAR 2013*, Washington, DC, USA, August 24 2013 (New York: ACM 2013); *Proceedings of the 3rd International Workshop on Historical Document Imaging and Processing, HIP@ICDAR 2015*, Nancy, France, August 22 2015 (New York: ACM, 2015); *Proceedings of the 4th International Workshop on Historical Document Imaging and Processing*, Kyoto, Japan, November 10-11, 2017 (New York: ACM 2017)

[24] Vincent Christlein, and Elli Angelopoulou, "Automatic Writer Identification in Medieval Papal Charters", in: *Papsturkundenforschung zwischen internationaler Vernetzung und Digitalisierung. Neue Zugangsweisen zur europäischen Schriftgeschichte*, ed. by Irmgard Fees, Benedikt Hotz, and Benjamin Schönfeld
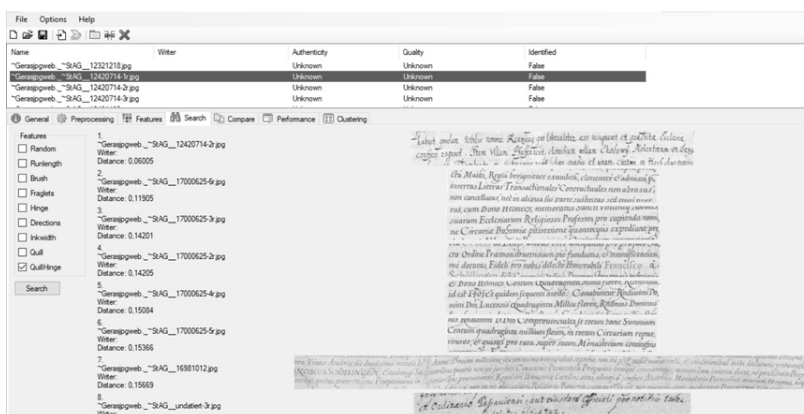
Figure 2-2. 10 most similar samples to Stiftsarchiv Geras Urkunden 1242 VII 25, (http://monasterium.net/mom/AT-StiAGe/Urkunden/1242_VII_15/charter)   as suggested by GIWIS

Still, Jinna Smit successfully used a tool based on these methods (GIWIS) to identify scribal hands in the 14th century registers of the courts of Holland.[25] The GIWIS tool, developed by the Groningen based team of Lambert Schomaker,[26] can even be 'misused for dating purposes': the tool works with criteria to suggest hand similarities which are useful for rough dating purposes. As a simple test, I put a selection of charter images from the Lower Austrian monastic archives through GIWIS, and browsed through the ten closest samples to each of the documents. This demonstrated that a document assigned the date 1242 as archival metadata,[27] appears in the context of documents written in the 17th century, because it is a later copy of a 13th century act (Figure 2-2).

(Göttingen: Göttinger Akademie der Wissenschaften, 2015, res doctae), 19-26, accessed August 1 2018, https://rep.adw-goe.de/bitstream/handle/11858/00-001S-0000-0023-9A13-A/3_Christlein.pdf?sequence=67.

[25] Jinna Smit, „Meten is weten? De toepassing van het Groningen Intelligent Writer Identification System (GIWIS) op Hollandse kanselarij-oorkonden, 1299-1345," *Bulletin de la Commission royale d'Histoire*, 176, 2 (2010): 343-359. Jinna Smit, "The Death of the Palaeographer?: Experiences with the Groningen Intelligent Writer Identification System (GIWIS)," *Archiv für Diplomatik*, 57 (2011): 413-426.

[26] Axel Brink et al., "Writer identification using directional ink-trace width measurements," *Pattern Recognition*, 45 (2012), 162-171. DOI: 10.1016/j.patcog.2011.07.005.

[27] Stiftsarchiv Geras Urkunden 1242 VII 25, accessed August 1 2018, http://monasterium.net/mom/AT-StiAGe/Urkunden/1242_VII_15/charter.

At the International Conference on Frontiers in Handwriting Recognition (2016), Florence Cloppet, Véronique Eglin, Van Kieu, Dominique Stutzmann, and Nicole Vincent, organised a palaeographical classification competition called CLAMM, where the challenge was to algorithmically classify digital images from the French *manuscrits datés* publications.[28] The results support the impression that machine learning, combined with computer vision algorithms, is able to reproduce script classifications, and therefore, rough attributions to date and area. From their experiences in this competition, Dominique Stutzmann, Mike Kestemont and Vincent Christlein have recently argued that the application of neural networks to palaeographical research with digital images can become artificial palaeography, i.e., can create computational results which are not a mere repetition of human perception of a manuscript, but can trigger new research questions.[29] The digital methods which demonstrated convincing results in the CLAMM competition, suggest that the gradual and historical continuum between *textualis*, *hybrida*, and *cursiva* scripts should be taken more seriously, and regional habits in writing style in the later Middle Ages could not be defined as clearly by formal criteria as previously assumed. The machine reproduces existing input, and with this, highlights when human judgment is beyond purely visual and quantifiable arguments.

Can we extend the use of digital images to the area of *manuscript$_V$* as well? Of course, manuscripts have many visual features beyond the text itself. In library and archival practice these are often neglected. A good example would be notarial documents in German archives from the late middle ages, which are the exception amongst a vast amount of documents authenticated by seals, and therefore, are hard to find. Description and images of these documents are part of monasterium.net, but, as the archivists are focused on the objects as information carriers (*manuscript$_I$*), they often provide no metadata on the existence of these visual features. With the availability of digital manuscript images, manual selection across dislocated archival fonds is possible. Magdalena Weileder, in her study on early notarial documents in Germany, created a private collection of 974

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[28] Florence Cloppet et al., "ICFHR2016 Competition on the Classification of Medieval Handwritings in Latin Script," in: *Proceedings of the International Conference in Frontiers on Handwriting Recognition (Shenzhen, China, 2016)*, 590-95.

[29] Mike Kestemont et al., "Artificial Paleography. Computational Approaches to Identifying Script Types in Medieval Manuscripts," *Speculum*, 92 (2017): 86-109.

notarial instruments just by browsing through 34,172 charters in 38 selected archival fonds from ten German archives, in monasterium.net.[30]
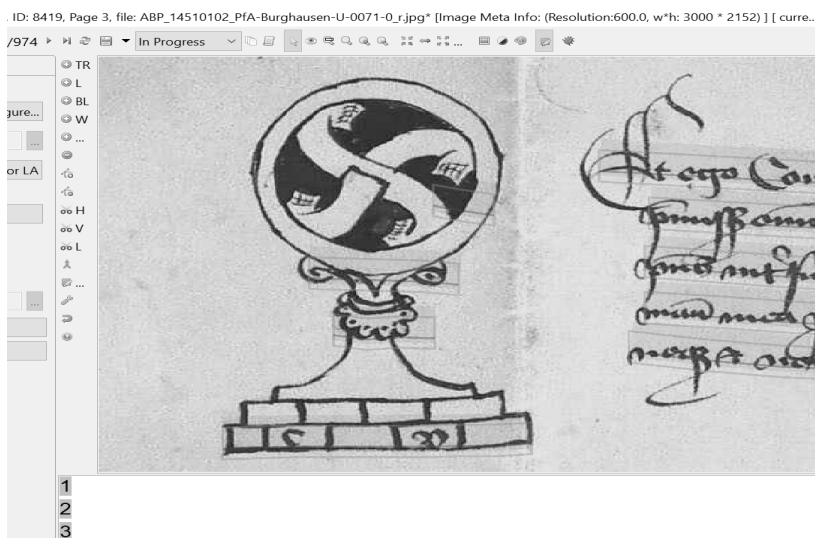
Figure 2-3. Screenshot from Transkribus, layout detection on the area of the notarial sign in the Archive of the Diocese of Passau, Urkunden, 1451 I 2 (http://monasterium.net/mom/DE-ABP/Urkunden/1451_I_02/charter)

Classification of manuscripts by their visual features could be done by a formal description of manuscript layout. Layout detection is already a task of handwritten text recognition software, and one that poses significant challenges. One of the best layout detection models is used in the Transkribus software developed in the READ project. The current CITLab

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[30] The database is not publicly available. It is the basis for the currently unpublished PhD dissertation of Lena Weileder, *Notarsurkunden in rheinischen und süddeutschen Bischofsstädten (von den Anfängen bis zum Jahr 1500)* (Munich: PhD diss., 2017). Cfr. Lena Weileder, „Spätmittelalterliche Notarsurkunden aus virtuellen Archiven," in: *Lesesaal Internet. Erfahrungen, Ergebnisse und Wünsche auf dem Weg zu einer digitalen Forschungslandschaft archivischer Quellenbestände.* Workshop im Rahmen der Reihe ICARUS@work und des EU-Projekts ENArC vom 11. März 2014 in München, ed. by Julian Holzapfl (München: Bayerisches Hauptstaatsarchive, 2014), (Sonderveröffentlichen der Staatlichen Archive Bayern 10), 50-57.

Advanced Model,[31] applied in the software, can recognise standard features in manuscripts (text areas, lines) even under non-optimal conditions (e.g., the presence of stains or distortions by folds). Nonetheless, it focuses only on one aspect of the manuscript. It is trained to identify lines of text, and fails, for example, to identify notarial signs (Figure 2-3).

Even standard layout features like initials are considered as their own text areas (Figure 2-4).

Figure 2-4. Transkribus Layout detection on Stiftsarchiv Göttweig, Urkunden, 1447 III 29
(http://monasterium.net/mom/AT-StiAG/GoettweigOSB/1447_III_29/charter)

Hence, the complexity of the visual impression of a manuscript requires dedicated models. The Illuminated Charters project[32] studies single sheet legal documents (charters) from the Middle Ages and the early modern period, with decoration. It shares the task to find rare samples by visual features with the research on notarial signs. From archives all over Europe, the project has collected more than 1,100 documents[33] in the core group, as defined by Martin Roland: "Charters with figural (depictive) decoration which is historiated, i.e., decorated respective to content, issuer, recipient or

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[31] Developed by the team around Roger Labahn and Tobias Strauß at the CITlab of Rostock University.
[32] https://illuminierte-urkunden.uni-graz.at/, accessed August 1 2018.
[33] http://monasterium.net/mom/index/illurk-vocabulary/Niveau1, accessed August 1 2018.

user. Furthermore, all charters using additional colour(s) prominently as a means of decoration" (level 1).[34] A group of more than 700 samples on monasterium.net carry decoration richer than usual in contemporary documents (level 2),[35] and this was never meant to be comprehensive. A main obstacle in creating this collection was, and still is, that the metadata, as provided by archivists in monasterium.net, or in public charter databases, is not very extensive for identifying Illuminated Charters.

Experiments with a generic image analysis tool demonstrate that it is possible to support the user locations of these documents by computer-based analysis of digital images. Ilastik[36] is an open source image analysis tool. It offers a graphical user interface suitable to the needs of humanities scholars, although it was written for bio-medical imaging. In a test, it was trained, using 10 images from the Illuminated Charters data set, to identify background, the charter itself, the colour target on the image, the seal, the tags by which the seal is attached to the charter, and the graphical elements falling, defining the level 1 group of illuminated charters. Even this small training set made automatic predictions possible.

Figure 2-5is an example of the predictive segmentation done by Ilastik. Transparent colours represent probability layers: blue refers to the background of the image (the non-charter), yellow to the color-target, green refers to the charter, red to the illuminations, and purple to the seals. They are calculated by a set of 13 features which could be assigned to each pixel (incl. neighbouring pixels). Setting an appropriate threshold,[37] the intense colours are the areas assumed to be illuminations (Figure 2-6). But, similar to the Himanis example, the thresholding is significant: The colour initials on the right of the sample image are not identified by the current threshold.

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[34] Martin Roland, *Illuminated Charters. Definitions*, https://illuminierte-urkunden. uni-graz.at/en/illuminated-charters/, accessed August 1 2018. Martin Roland, „Illuminierte Urkunden im digitalen Zeitalter. Maßregeln und Chancen," in: *Digital Diplomatics. The Computer as a Tool for the Diplomatist?* ed. by Antonella Ambrosio, Sébastien Barret, and Georg Vogeler, (Köln et al.: Böhlau, 2014), (AfD Beiheft 14), 245-269.

[35] http://monasterium.net/mom/index/illurk-vocabulary/Niveau2, accessed August 1, 2018.

[36] http://ilastik.org, accessed August 1 2018.

[37] On thresholding in layout detection see for instance E. Roe and C. A. B. Mello, "Thresholding Color Images of Historical Documents with Preservation of the Visual Quality of Graphical Elements", *Integrated Computer-Aided Engineering*, 25,3 (2018): 261-72. DOI: 10.3233/ICA-180562.

Figure 2-5. Layout detection with Ilastik, prediction on Archivo Histórico Nacional, Madrid, Monasterio San Pedro Rocas SIGIL-SELLO,C.13,N.7 (http://monasterium.net/mom/ES-AHN/MonasterioSanPedroRocas/SIGIL-SELLO%2CC.13%2CN.7/charter)
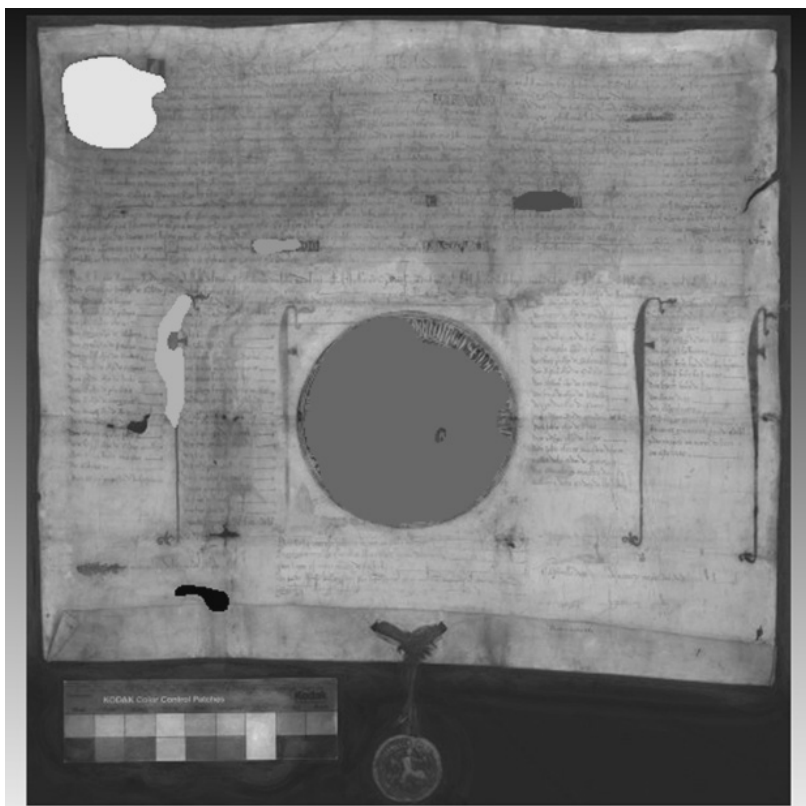
Figure 2-6. Layout detection with Ilastik on Archivo Histórico Nacional, Madrid, Monasterio San Pedro Rocas SIGIL-SELLO,C.13,N.7, object classification after thresholding

Encouraged by similar experiments, Vincent Christlein from Erlangen University trained a Support Vector Machine-based classifier for the task.[38] According to the tests, it should be able to identify the four levels of illumination used in the project, with accuracy between 72% and 85% (Table 2-1). It extracted key points with a scale-invariable feature transformer, i.e., points clearly to be distinguished in any scaling of the

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[38] Christlein, Vincent, "Automatic Detection of Illuminated Charters," in: *Illuminierte Urkunden. Beiträge aus Diplomatik, Kunstgeschichte und Digital Humanities*, ed. by Gabriele Bartz and Markus Gneiß (Köln et al: Böhlau 2018), (AfD Beiheft 15), 45-52.

document, and used them, together with their surroundings, in the image, as descriptors. By this method, drawn lines become a main feature of the image, which is not too far away from written text, and can obviously help to distinguish decorative lines from text.

The confusion matrix of his tests, using a manually annotated set of 9,996 charters, provides a deeper insight into the role of the digital image in the process. The misattribution of samples from level 1 to level 2, and of the samples from level 3 to level 4, is not reproduced in the other direction, which means the machine reflects that the classes represent a kind of continuum: Level 1 is distinguished from level 2 by the use of images of real objects, or scenes and colour. As the computational method did not use colour information, the confusion is not surprising. Level 3 represents standard documents with additional graphical means of authentication. As the Transkribus layout detection above has demonstrated, parts of notarial signs can have similar features to text lines.

Table 2-1. Confusion Matrix in automatic detection of illuminated charters in a corpus of charters from Lower Austria, as annotated in the Illuminated Charters project (Christlein 2018)

		Automatic attribution				
		Level 1 (historiated)	Level 2 (decorated)	Level 3 (graphical authentication)	Level 4 (no graphical elements)	Precision
Human attribution	Level 1 (historiated)	336	87	4	25	74%
	Level 2 (decorated)	97	1459	90	288	75%
	Level 3 (graphical authentication)	1	56	342	75	72%
	Level 4 (no graphical elements)	32	897	113	6094	85%

Much more significant is the misattribution of samples from levels 1 and 4, which is reciprocal. A total of 14.9% of the documents classified as level 1 were attributed to the level 4 group, and 12.6% of the level 4 documents to level 1. Documents labelled 'unusually rich decoration' are relatively often categorised as documents carrying no decoration at all, and vice versa. This misattribution can be explained by the definition of the level 2 class. The definition of 'richly decorated' charters reads as follows:

> *Charters with drawn (graphic) decoration or display scripts with decorative character*, exceeding the contemporary standards and/or characteristics for the production of chancelleries. The graphic decoration became more and more elaborate from the 13th century onwards. Therefore, the selection must refer to a standard of the specific period.[39]

Browsing through the misattributed samples, it becomes clear that the best explanation comes from the cultural/historical criteria in the definition. The definition depends on the historical context, while the classification algorithm does not take into account the period when the document was written. The digital image of the manuscript, therefore, does not suffice to enable the computer to extract its full visual information.

To conclude, what are the research possibilities of digital images of manuscripts? The digital methods established as research methods with digital images, and those currently in development, go beyond pure availability. Algorithm-based methods cover information like script type and scribe, and they close into textual transcription and basic layout. The algorithms work more or less in combination with human efforts: humans create the databases referencing image parts from distributed collections, and they write the queries to extract new knowledge from these databases. Algorithms trained on collections grouped into classes by humans suggest dates, writers, transcriptions, and layout, by their visual features. The digital images, thus, extend their coverage from the visual, the feature sets, and the material aspect of a manuscript ($manuscript_{VFO}$) to be interpreted by humans towards the interpretations of these aspects as visual or linguistic code, structures, and even intentions and meanings ($manuscript_{ICW}$). But we have to be aware that the $manuscript_{IFW}$ is related to information beyond the information the digital image conveys by itself: many distinctions are related to the cultural context, which currently is available to the computer only through human descriptions. Thus, the full set of research possibilities with digital images from manuscripts comes into play only when it is combined with human metadata organised in such a way that the machine can infer information from it. The research possibilities created by digital images of manuscripts lie in the combination of the existing tools for human annotation of digital images, the emerging automatic processes based on computer vision, and future reasoning methods applied to the human descriptions and statistics extracted from the training sets.

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[39] https://illuminierte-urkunden.uni-graz.at/en/illuminierte-urkunden/, accessed August 1, 2018, and Roland, „Illuminierte Urkunden" 2014, 260.

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TOPIC II:

DESCRIPTION AND ACCESS TO CULTURAL HERITAGE: CONCEPTUAL MODELS AND STANDARDS

CHAPTER 3

TELLING TAILS:
METADATA STANDARDS
AND THE DIGITAL HUMANITIES

GORDON DUNSIRE

Abstract

This paper discusses the long tail of information resources relevant to humanities research, and how relationships between resources become entangled over time. While the application of information technologies has resulted in an explosion of digital information resources of significant benefit to the humanities, the quantity of resources and the complexity of their relationships, cause problems for information-seeking activities. New metadata standards developed in the library world have the potential to alleviate some of the issues. This paper describes the IFLA Library Reference Model, and its implementation in Resource Description and Access (RDA); a cataloguing standard in widespread use. These are focused on creating metadata content for the semantic web, and linked data information retrieval systems based on online networks of digital resources.

Keywords: metadata, humanities research, semantic web, linked data, bibliographic models

The long tail

The 'long tail' refers to a numerical distribution where a few instances account for the largest measurements, and many occurrences account for smaller measurements. For example, a graph of the number of sales of popular music recordings will usually show that the highest sales occur for a small number of recordings; the 'top ten', and that older recordings make fewer sales, but over a much longer period of time. In fact, the long tail of

older recordings may cumulatively sell as many as the 'head' of the current hit parade. The impact of this distribution on business economics is discussed by Anderson.[11]

The unit cost of physical storage of a 'back catalogue' limits the availability of older products and resources; this restriction effectively disappears when such resources are digital and online. Libraries incur significant costs in maintaining collections of physical information resources, such as books, journals, and multimedia recordings; the cost per resource for shelving and filing is small, but it accumulates for every item in the collection, irrespective of whether it is borrowed or consulted. As the collection grows, costs go up, and older resources that have very low usage are often removed from the collection to save money. On the other hand, a digital information resource can have an infinite shelf-life, and a library may find it cheaper to keep it in the collection than to remove it.

Dempsey discusses the impact of the long tail on the aggregation of supply and demand in libraries, pointing out that the lack of integration in services for resource discovery and access leads to an increase in transaction costs. "Libraries collectively manage a long tail of research, learning and cultural materials. However, we need to do more work to make sure that this long tail is directly available to improve the work and lives of our users … We need new services that operate at the network level, above the level of individual libraries."[2]

For a collection of online digital resources, transaction costs are now associated with the discovery phase of the process; when a resource is found, instant access is mediated through the ubiquitous and cheap availability of smart phones and other networked information processing devices. The discovery costs are borne by the information seeker, primarily in the time it takes to identify and choose a suitable discovery tool, to navigate from one online catalogue to another, and to formulate different search criteria in different databases.

The long tail also applies to the citation of scholarly resources by researchers: materials published more recently are generally cited more frequently, with a few seminal resources attracting high levels of citation

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[1] Chris Anderson, *The long tail: why the future of business is selling less of more* (New York: Hyperion 2006)
[2] Lorcan Dempsey, "Libraries and the long tail: some thoughts about libraries in a network age," *D-Lib Magazine*, 12, 4 (2006), accessed April 29 2018, http://www.dlib.org/dlib/april06/dempsey/04dempsey.html.

across much longer periods of time. The increasing online availability of older materials is amplifying this effect.[3]

Meho and Tibbo propose a model for the information-seeking behaviour of social scientists that contains four interrelated stages: searching, accessing, processing, and ending.[4] The searching stage comprises activities for starting, chaining, browsing, monitoring, extracting, and networking; the paper notes that most of these are now supported by web browser software. The accessing stage is more problematic, with some published resources being difficult to obtain across national boundaries, and with political and economic barriers to accessing unique materials in archives.

The long tail impacts on relationships between resources. As time goes by, a seminal work will accumulate multiple editions, with or without additions, derivative works, and commentaries, analyses, and other descriptive works. Each related work may itself become the source of other derivative and descriptive works, and so on. The result can be an entanglement of long tails; a multiplicity of interwoven strands where an interest in one resource stimulates interest in related resources.

This is a particular issue for the humanities, where an information resource is likely to remain relevant for a longer time than in other research disciplines. The longer something is relevant, the more likely it will be associated with other resources.

Murray and Tillett illustrate the complexity of relationships between resources using Melville's novel, Moby Dick.[5] Their paper describes the use of mathematical graphs to represent such relationships, based on Functional Requirements for Bibliographic Resources (FRBR), a model developed by the International Federation of Library Associations and Institutions (IFLA).

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[3] Ling-Ling Wu, Luesak Luesukprasert and Lynne Lee, "Research and the Long Tail: A Large-Scale Citation Analysis," *42nd Hawaii International Conference on System Sciences, Big Island, HI, 2009*, 1-10, doi:10.1109/HICSS.2009.368.

[4] Lokman I. Meho and Helen R. Tibbo, "Modeling the information-seeking behavior of social scientists: Ellis's study revisited", *Journal of the Association for Information Science and Technology*, 54: 570-587, doi:10.1002/asi.10244.

[5] Robert J. Murray and Barbara B. Tillett, "Cataloging theory in search of graph theory and other ivory towers: object: cultural heritage resource description networks," *Information Technology and Libraries*, December 2011, doi:10.6017/ital.v30i4.1868.

Explosion of digital resources

The number of digital resources of interest to the humanities continues to increase as a result of the general application of information technologies, and their specific application in carrying out and supporting research.

The ubiquitous availability of machines and services for the creation, storage, and distribution of personal digital information is producing resources, such as emails, tweets, blogs, photographs, and videos, that will be valuable to future humanities research as a reflection of current human activity.

At the same time, the mass digitization of archive, library, and museum documents and objects for preservation and wider access is making large quantities of primary research material available. For example, the Hathi Trust Digital Library is "a partnership of major research institutions and libraries working to ensure that the cultural record is preserved and accessible long into the future." The Library contains over 16 million 'volumes'; a search on "Moby Dick" retrieves more than 10,000 items. [6]

Digital technologies are also having a significant impact on 'uncovering the past'. The use of drones and remote-sensing, coupled with the application of ground-penetrating radar and metal detection equipment, is making significant advances in archaeology. Agapiou and Lysandrou investigate the development of remote-sensing archaeology using citation analysis, and argue for "the development of a common depository of all knowledge." [7] Medical imaging technologies are applied to the non-invasive detection of palimpsests in old manuscripts, and manuscript fragments used in old book-bindings. Digital technologies improve the reconstruction of old texts from such fragments, the identification of scribes from handwriting comparison, the analysis of words and writing systems, and so on. There are many other examples.

Library Reference Model

The IFLA Library Reference Model (LRM) was published in August 2017 by the International Federation of Library Associations and Institutions (IFLA). [8] It consolidates previous IFLA models for Functional Requirements

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[6] *Hathi Trust Digital Library*, accessed April 29 2018, https://www.hathitrust.org/.
[7] Athos Agapiou and Vasiliki Lysandrou, "Remote sensing archaeology: tracking and mapping evolution in European scientific literature from 1999 to 2015", *Journal of Archaeological Science*: Reports, 4 (2015), 192-200.
[8] Pat Riva, Patrick Le Bœuf, and Maja Žumer, *IFLA Library Reference Model: a conceptual model for bibliographic information. Definition of a conceptual*

for Bibliographic Records (FRBR), Functional Requirements for Authority Data (FRAD), Functional Requirements for Subject Authority Data (FRSAD), and the report of the IFLA Working Group on Aggregates. The LRM is compatible with the CIDOC Conceptual Reference Model (CRM)[9] published by the International Council of Museums and the International Committee for Documentation. This is achieved via LRM compatibility with FRBRoo,[10] the object-oriented model of FRBR which is a formal extension of the CRM. The development of FRBRoo from the original FRBR model was a precursor to the LRM.

The LRM identifies a set of entities or classes of things of interest when describing and retrieving information resources. These entities are:

- *Work*, *Expression*, *Manifestation*, and *Item*: the four aspects of a resource categorized in the original FRBR model.
- *Agent*, sub-classed as *Person* and *Collective Agent*: one or more real persons who live, or are assumed to have lived.
- *Place*: the human identification of a geographic area or extent of space, and as such, a cultural construct.
- *Time-span*: the human identification of a temporal extent having a beginning, an end and a duration, and also a cultural construct.
- *Nomen*: an association of a string or 'combination of signs' with an exemplar of an entity on the basis of a cultural or linguistic convention. The same nomen string may label or name multiple exemplars; each association is mediated via a separate Nomen to provide disambiguation.

The LRM also uses a super-entity, *Res*, to declare characteristics that are common to the other entities, and to allow extension of the model to other entities of interest beyond the bibliographic world.

The *Work* entity is the intellectual basis of an information resource. In a resource, a *Work* is realized by an *Expression* and embodied by a

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reference model to provide a framework for the analysis of non-administrative metadata relating to library resources (International Federation of Library Associations and Institutions, August 2017. As amended and corrected through December 2017), accessed April 29 2018,
https://www.ifla.org/files/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017_rev201712.pdf.
[9] *CIDOC CRM*, accessed April 29, 2018, http://www.cidoc-crm.org/.
[10] Working Group on FRBR/CRM Dialogue, *Definition of FRBROO: a conceptual model for bibliographic information in object-oriented formalism* Version 2.4. (International Federation of Library Association and Institutions, November 2015), accessed April 29 2018,
https://www.ifla.org/files/assets/cataloguing/FRBRoo/frbroo_v_2.4.pdf.

Manifestation that is exemplified by an *Item*. An *Item* may be tangible or intangible, for example an online *Manifestation* downloaded, albeit temporarily, to a computer screen. The boundary of a *Work* is a cultural artefact, and is usually determined by an *Expression* that is judged to be sufficiently 'different' enough in some community or context to constitute a new *Work*.

The LRM provides broad relationships between two Works. These include 'precedes' (LRM-R19), 'accompanies/complements' (LRM-R20), 'is inspiration for' (LRM-R21), and 'was transformed into' (LRM-R22). These relationships can be used as a semantic comb to help disentangle the complex dependencies found between works of interest to the digital humanities.

One or more persons interacting with a resource in some way or another, intrinsic or extrinsic to the resource itself, are modelled as an *Agent* entity. A *Person* is a single human person; a *Collective Agent* is two or more Persons acting together.

The LRM provides a generic 'creator' relationship between an *Agent* and a *Work*, *Expression*, or *Manifestation*. These cover for example, an author, translator, and publisher respectively. The LRM describes the 'creation' aspects of an Item using the one, and only one, *Manifestation* that the *Item* exemplifies. In general, the justification for a description of a specific *Item* is that it has been altered to distinguish it from other Items exemplifying the same *Manifestation* (if they exist), and the LRM provides a generic 'modifier' relationship between an *Agent* and an *Item*.

The *Place* and *Time-span* entities accommodate the descriptions of geographical and chronological data associated with other entities. Library metadata standards have generally treated places and dates in the context of subject classification, as 'standard sub-divisions' which act as qualifiers to primary subjects. This is made explicit in the Colon Classification system developed by S.R. Ranganathan; the 4th edition uses a set of ordered 'facets' used to construct any subject, consisting of Personality, Matter, Energy, Space, and Time.[11] FRBR defines entities for Place and Event, but also confines their context to use as subjects. The LRM's treatment of *Place* and *Time-span* as entities in their own right is of particular importance to the description and access of resources of interest in research with a geographical or historical focus.

The *Nomen* entity allows statements to be made about any label that is used to 'name' an entity. This includes human-readable and machine-

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[11] S.R. Ranganathan, *Colon classification*, 4th edition (Madras: Madras Library Association 1952)

readable labels, for example the name and identifier of a *Person*. The LRM effectively assumes that everything has a name of some kind; otherwise how can the referrant be identified? A *Nomen* is different from the other LRM elements in several respects. It has a mandatory attribute, its 'nomen string'. A Nomen has no utility, outside of onomastics, unless it is related to a specific entity of interest.

The LRM provides a broad 'appellation' relationship between an entity and a Nomen. It also offers an 'assigned' relationship (LRM-R14) between a Nomen and an Agent; most labels are assigned to an entity by some kind of Agent, ranging from parents to official corporate bodies. This may be particularly useful in archive applications. It also provides relationships between Nomens that can be used in 'authority control' to provide standardized and distinct forms of name; these comprise 'is equivalent to' (LRM-R15), 'has part' (LRM-R16), and 'is derivation of' (LRM-R17). A set of attributes for describing a Nomen also provides support for disentangling multiple names and titles for the same thing, and similar names and titles for different things. Attributes include 'scheme' (LRM-E9-A3), 'context of use' (LRM-E9-A5), 'language' (LRM-E9-A7), and 'script' (LRM-E9-A8).

Linked data and the semantic web

Mathematical graphs underpin the Resource Description Framework (RDF) data model developed by the World-Wide Web Consortium.[12] In RDF, metadata statements are stored as 'triples': each statement consists of a subject (the focus of the statement), a predicate or property (the aspect of the statement), and an object (the value of the aspect). The object of one triple can be linked to the subject of another triple, resulting in a graph of connected statements or linked data. RDF is a major technology for the development of the semantic web, building a layer on the world-wide web for machine-readable information that improves the efficiency of information retrieval. Willer and Dunsire describe the application of RDF and the semantic web to the organization of bibliographic information.[13]

The LRM "covers bibliographic data … in a broad, general sense"; what it refers to as "the universe of (human) discourse." It was developed to

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[12] W3C, *RDF Schema 1.1*, 25 February 2014, accessed April 29 2018, https://www.w3.org/TR/rdf-schema/.
[13] Mirna Willer, and Gordon Dunsire, *Bibliographic information organization in the Semantic Web* (Oxford: Chandos 2013)

exploit semantic web technologies, including the underlying internet and world-wide web infrastructures.

The semantic web is designed to operate with two principles that are of immediate importance to research and teaching disciplines, including the digital humanities. These are:

> The AAA principle, or "Anyone can say Anything about Anything", implies that the 'truth' of an RDF statement cannot be assumed. There is no intrinsic way of detecting deliberate misinformation or metadata of very poor quality in an RDF statement.

> The Open World Assumption (OWA) implies that none of the entities have complete descriptions, and it is assumed that new statements can always be made about anything of interest. The RDF graph of linked data is always growing, and it is a simple process to add any new information about a resource.

The metadata deluge

The deluge of digital resources is accompanied by metadata from a much wider variety of sources than before. Sources include trained cataloguers, researchers, publishers, the public, and computer applications. These metadata can be categorized by quality and reliability.

Linked data based on semantics is 'smart'. They are maximized for machine processing, and can be used to enrich a broad range of applications.

Metadata from professional sources is informed by established standards, training, and ethics. Libraries, archives, museums, and other cultural heritage organizations make considerable investment in high quality metadata for providing information services for their users and access to their collections. This is an expensive activity when funding is reduced and collections are expected to expand to accommodate more and more digital resources.

Metadata from amateurs, members of the public who have an interest but are untrained, can be ill-informed and of dubious reliability. Projects using crowd-sourcing techniques to supply missing metadata can be very effective by utilizing the input of many people, but require careful design to control the terminology of responses and improve the smartness of the results.

Machine-generated metadata is basically 'dumb', unless it is derived from already smart semantic data; the old adage of 'garbage in, garbage out' is just as applicable now as it has ever been. Artificial intelligence is based on smart data, but cannot of itself transmute dumb data to smart; human

intelligence is required for that. And, unfortunately, increasing quantities of available metadata are 'mad or bad' in the form of 'fake news', and criminal and political dis-information campaigns.

Resource description and access

RDA: Resource description and access is "a package of data elements, guidelines, and instructions for creating library and cultural heritage resource metadata that are well-formed according to international models for user-focussed linked data applications."[14]

The RDA Toolkit Restructure and Redesign (3R) Project[15] is developing RDA as an implementation and extension of the LRM,[16] with an initial release scheduled for June 2018.

The RDA instructions and elements support several methods for recording data values that describe or identify an exemplar of an RDA entity. These methods cover the different information storage and retrieval architectures given in the RDA database implementation scenarios.[17] These include flat-file descriptions, standard bibliographic description records with access points, and RDBMS in third normal form with a separate table for each entity. Linked data applications using Resource Description Framework (RDF) are also accommodated.

The recording methods are:

- **Unstructured description**: Data values are assumed to have no controlled terminology or structure, and are suitable for keyword indexes.
- **Structured description**: Data values use controlled terminology, specified by a vocabulary encoding scheme, or are derived and laid out according to a string or syntax encoding scheme. Typical vocabulary encoding schemes include thesauri and authority files; typical string

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[14] Committee of Principals for RDA, *Committee of Principals Affirms Commitment to the Internationalisation of RDA* (RDA Steering Committee, 29 May 2015), accessed April 29, 2018, http://www.rda-rsc.org/node/235.

[15] RDA Steering Committee, *3R Project: Update from 2016 Frankfurt Meeting* (RDA Steering Committee, 28 November 2016), accessed April 29 2018, http://www.rda-rsc.org/3Rprojectupdate.

[16] RDA Steering Committee, *Implementation of the LRM in RDA* (RDA Steering Committee, 3 February 2017), accessed April 29, 2018, http://www.rda-rsc.org/ImplementationLRMinRDA.

[17] Tom Delsey, *RDA database implementation scenarios* (Joint Steering Committee for Development of RDA, 1 July 2009), accessed April 29 2018, http://www.rda-jsc.org/archivedsite/docs/5editor2rev.pdf.

encoding schemes include publication statements composed of place, publisher, and date of publication values, and descriptions of technical specifications that are relevant to the access to, and use of, a resource.

- **Identifier**: Data values are taken from a machine-readable identifier scheme that has a closed domain. Typical identifier schemes range from the International Standard Serial Number (ISSN) and International Standard Name Identifier (ISNI), to local database identifiers.
- **Internationalized Resource Identifier** (IRI): Data values conform to RDF and semantic web standards, with an open domain. These include the Uniform Resource Identifier (URI) for an exemplar of an RDA entity.

The recording methods also offer an implementation of the LRM's Nomen entity. The LRM 'appellation' relationship (LRM-R13), which links a Nomen to its referent, is categorized into three sub-types in RDA:

- **Name or title of RDA entity**: an unstructured description in natural language and phrasing. RDA provides sub-types for preferred and variant forms that are used in 'name' authority files.
- **Access point for RDA entity**: a structured description in natural language that uses a specified string encoding scheme to assemble and process values corresponding to other descriptive elements. An example is an appellation of a person that moves the family name or surname to the front, and adds date of birth, profession or occupation, etc. RDA provides sub-types for authorized and variant forms that are used in authority files.
- **Identifier for RDA entity**: a machine-readable string of characters, etc. from a specified system.

There is no requirement for treating an IRI as a Nomen; in a linked data application, it is already an IRI that is the 'same as' the IRI for the RDA entity.

This infrastructure can be used to accommodate a large part of the metadata deluge. The recording methods are listed above in 'dumb' to 'smart' order. An application can extract keywords from an unstructured description using natural language processing techniques, but cannot reliably match the resulting strings to external metadata applications. Structured descriptions and identifiers are easily matched within the specified vocabulary encoding scheme or authority control system, and therefore with external metadata that use the same scheme or system. IRIs

are implicitly a part of the giant global graph[18] of the semantic web, and the metadata are automatically connected.

Metadata that purport to be the names of people, organizations, places, and time-spans, but have dubious provenance, can be stored as unstructured descriptions, so that applications confine data processing to keyword indexes. Metadata from trusted sources, supported by the provenance of an identified scheme or system, can be stored as structured descriptions or identifiers that can be reliably linked to metadata from similar trusted sources. Sources can include agencies employing metadata professionals, or staff trained in the use of a specific vocabulary or authority file. A crowd-sourcing service that uses a vocabulary or authority heading to constrain the data input system can supply structured data from untrained persons.

Conclusion

The Library Reference Model and its refinement in RDA are designed to create metadata that describe the products of human discourse in all of their forms. The product, in this context, is information that is recorded so that is accessible in the future; a memory of human cultural activity.

Such products are the focus of study in the humanities. The digital humanities is simply defined as "the intersection of the humanities and the digital."[19] That intersection occurs in born-digital and digitized information resources (the products), and in the tools used to study the output of human discourse whether digital or analogue.

One of the most important tools for the digital humanities is the semantic web of linked open data that promises a global, machine-assisted retrieval system for information resources. The LRM and RDA have been developed to exploit that tool, and are well placed to deliver the rich, smart, and comprehensive metadata required to support the humanities in a digital environment, and to 'tell' the long tale of human culture.

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[18] Tim Berners-Lee, "Giant global graph" 2007-11-21, accessed April 29 2018, https://web.archive.org/web/20160713021037/http://dig.csail.mit.edu/breadcrumbs /node/215.
[19] Patrik Svensson, "The Landscape of Digital Humanities," *DHQ: Digital Humanities Quarterly*, 4,1 (2010), accessed April 29 2018, http://digitalHumanities.org/dhq/vol/4/1/000080/000080.html.

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CHAPTER 4

THE 17TH CENTURY "BOUND-WITH" GLAGOLITIC MANUSCRIPTS FROM ŽMAN, CROATIA: REQUIREMENTS FOR MODELLING "BOUND-WITH" MANUSCRIPTS DESCRIPTION

MARIJANA TOMIĆ AND MIRNA WILLER

Abstract

Manuscripts, as the subject of research in various humanities disciplines, should be described in such a manner so as to appropriately describe their users' needs. This paper discusses manuscript description in the context of digital humanities by reflecting on some of the general problems of manuscript description and its function in fulfilling user tasks with the focus on 'bound-withs'. A 'bound-with' is an individual resource – in this case a manuscript, bound together with other manuscripts forming an 'artificial' collection. Requirements for modelling description of 'bound-withs', applying the *IFLA Library Reference Model* (IFLA LRM), enhanced with entities defined in object-oriented models PRESSoo and FRBRoo, are being investigated in the case study of the 17th century 'bound-with' Glagolitic manuscripts from the Žman Parish of the island of Dugi Otok, Croatia.

This research aims at informing and supporting two concurrent projects: *Digitization, bibliographic description and research of texts written in Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and Šibenik area* (*Written Heritage*), a joint project of the Department of Information Sciences of the University of Zadar, Croatia and Vestigia Manuscript Research Centre of the University of Graz, Austria, 2016-2021, and *Production, Publishing and Maintenance of National Cataloguing Rules*, 2014-2019, a joint project by the Croatian library, archive, museum, and academic communities.

Introduction: manuscripts, digital humanities, and the role of heritage institutions

The term *manuscript* (Latin *manu scriptus*), although today used to denote any non-print or pre-publication text, is usually defined as "a text or document, usually on paper or parchment, literally written by hand."[1] Manuscript collections are usually very heterogenic, comprising single and bound codices, i.e., manuscript volumes, archival documents, both personal and corporate, as well as fragments of varying provenance.

Considering that the fundamental role of humanities is understanding, researching and interpretation of objects and phenomena created by man, and that research in humanities usually includes study of original texts and products of human creative activities, manuscripts are often the subject of research in various humanities disciplines, i.e., history, history of arts, linguistics, palaeography, codicology, book history, heritology, etc. As manuscripts are to be found in heritage institutions, namely in libraries, archives and museums, humanities scholars are one of their primary users.[2] Based on what Sukovic emphasises – that "access to materials, particularly primary materials, has always been an important issue and cause of concern for humanities scholars",[3] it is to be concluded that what humanities scholars need from heritage institutions is a manuscript catalogue enriched with in-depth description and access points to allow searching, browsing and navigation, as well as one that provides links to digital representations of manuscripts and other relevant sources outside the catalogue itself.

A significant number of libraries and archives are creating and communicating digital representations of their holdings, especially old and rare books, including manuscripts and other cultural and historical documents, maps, images, etc. The basic aim of such digitization projects is primarily to enable access to institutions' valuable cultural assets, and,

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[1] Peter Beal, *A Dictionary of English Manuscript Terminology: 1450-2000* (Oxford University Press 2009), 244.
[2] *Cultural Heritage Infrastructures in Digital Humanities*, ed. by Agiatis Benardou, Erik Champion, Costis Dallas, and Lorna M. Hughes (New York: Routledge 2018), Kindle edition. Loc. 1563.
[3] Suzana Sukovic, "Humanities researchers and electronic texts," *LASIE: Library Automated Systems Information Exchange*, 31, 3 (Sept 2000): 12, accessed May 20 2018, https://search.informit.com.au/fullText;dn=751267861097004;res=IELHSS.

consequently, to foster their research and interpretation by remote scholars from different disciplines, and to promote their further understanding as part of the national and wider cultural heritage. Such massive migration of analogue manuscript material to the digital environment presents challenges and new research possibilities in humanities studies, imposing changes in research methodologies in all humanities disciplines. The library community in particular shows a high level of interest in the growth of digital humanities, according to Verhoeven and Burrows,[4] in building various applications, tools and services which have impact on research methods in humanities, offering scholars new ways of identifying, gathering, organizing, analysing and interpreting, as well as disseminating, sharing and re-using data. One can fully agree with Cassella who noted that, "a very special relationship is developing between digital humanities and digital libraries, as humanists massively use the digital library collections to study and to research."[5] Besides acting as a laboratory for humanities, Borgman notices that libraries and other heritage institutions increasingly act as active partners in humanities research.[6] This observation is confirmed by the research report published in 2014 by Schaffner and Erway for the OCLC Research Centre entitled *Does every research library need a digital humanities centre?*,[7] which, however, acknowledges that more comprehensive research in the area is still lacking.

We can conclude that, for a digital humanities scholar, access to information is crucial, but also crucial is the possibility to download and manipulate metadata and digital content of cultural heritage, such as tools to manage, mash up, mine, map or model them. Even more than that, they

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[4] Deb Verhoeven, and Toby Burrows, "Libraries and the digital humanities: partnership, collaboration and shared agendas," in: *VALA 2016: Proceedings of the Victorian Association for Library Automation 18th Biennial Conference and Exhibition, Victorian Association for Library Automation, Melbourne, Vic*, accessed May 20 2018, http://dro.deakin.edu.au/eserv/DU:30082201/verhoeven-libraries digitalhumanities-2016.pdf.

[5] Maria Cassella, "New Trends in Academic Library Partnerships: Academic Libraries and Digital Humanities," in: *Proceedings of the IATUL Conferences*. Paper 2, accessed May 20 2018.
https://docs.lib.purdue.edu/cgi/viewcontent.cgi?referer=https://www.google.hr/&httpsredir=1&article=2182&context=iatul.

[6] Christine Borgman, "The Digital Future is Now: A Call to Action for the Humanities," *Digital Humanities Quarterly*, 3,4 (2010): 21.

[7] Jennifer Schaffner, and Ricky Erway, *Does every research library need a digital humanities center?* (Dublin, Ohio: OCLC Research, 2014), accessed May 20 2018, https://www.oclc.org/content/dam/research/publications/library/2014/oclcresearch-digital-humanities-center-2014.pdf.

need a possibility to contextualize objects of cultural heritage accessed online, such as to reconstruct collections or fragments of the same codicological units located in different institutions.

To enable access to research material within one local or union catalogue, as well as across different institutions' catalogues, it is important to reach agreement on its description. In the next chapter we briefly present general issues in manuscript description practices, followed by a more narrowed focus on the modelling description of manuscript 'bound-withs'. The term 'bound-with' covers the activity and the product of the activity of binding items into an 'artificial' collection for specific purposes, or due to specific needs. This analysis of modelling 'bound-withs' focuses on the 17th century manuscripts written in Croatian Glagolitic script on paper.

Issues in manuscript description practices

Russel's historical survey on rare book cataloguing, published in 2003, shows that, in the context of libraries, manuscripts are usually part of special or rare books collections, and are described following rare book cataloguing rules.[8] These rules are focused primarily on incunabula and early printed material, however, a manuscript description needs an approach of its own.

The study of manuscripts generally falls within different scientific disciplines, grown both around their specific physical features (material and production techniques), and their content (subject, genre, script, language) of interest to specific users such as codicologists, historians, palaeographers, bibliographers, typographers, etc. As a consequence, manuscript description typically includes information not only on both the content and physical characteristics, but also on its context – the history or lifecycle of a manuscript. Clemens and Graham record a number of conventions by which these aspects are described,[9] while Beal in his *Dictionary of English Manuscript Terminology* specifies that in describing a manuscript, one usually describes its physical form, the nature of its content, or the function it performs (e.g., psalter, bible, history book), physical material (e.g., paper, ink), other physical features (e.g., size, page layout, collation, decoration), its condition, writing instruments, and surfaces, agents involved in its production (e.g., scribe, producer of paper), provenance, script, etc.[10]

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[8] Beth M. Russel, "Description and Access in Rare Books Cataloging: A Historical Survey," *Cataloguing & Classification Quaterly*, 35,3-4 (2003): 493.

[9] Raymond Clemens, and Timothy Graham, *Introduction to Manuscript Studies* (Ithaca, London: Cornell University Press, 2007), 129-135.

[10] Beal, *A Dictionary of English Manuscript Terminology*, IX.

Although description is usually made in great detail, it is mostly done in an unstructured, descriptive manner; with the exception of access points, data elements are mostly recorded or transcribed as free text, and by the use of sometimes inconsistent terminology which defies data search and retrieval. Fabian objects to such description, and claims that manuscript cataloguing practices have so far been dealt with essentially outside the well-defined structure of the bibliographic universe,[11] while Humphrey warns that some manuscript collections are inaccessible "because the collections had never been fully indexed or consistently organized", which has caused some of them to have "lain dormant and inaccessible for so long."[12]

In Croatia, incunabula and early prints are being described according to the national cataloguing rules of the *Pravilnik i priručnik za izradbu abecednih kataloga* (Code and Manual for the Compilation of Alphabetical Catalogues)[13] for creating access points and International Federation of Library Associations and Institutions' (IFLA) *International Standard Bibliographic Description* (ISBD)[14] for bibliographic description, both implemented in MARC formats (IFLA UNIMARC and MARC21). However, manuscript description is mostly done in a non-standard manner, and often outside a particular library catalogue, in a locally designed database or file that is generally unavailable to users. The requirement to provide a solution to standardized manuscript description was built into two concurrent projects: *Digitization, bibliographic description and research of texts written in Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and Šibenik area* (*Written Heritage*), 2016-2021, a joint project of the Department of Information Sciences of the University of Zadar, Croatia and Vestigia Manuscript Research Centre of the University of Graz, Austria,[15] and *Production, Publishing and*

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[11] Claudia Fabian, "RDA as a New Starting Point for International Cooperation: Retrospective National Bibliographies and Medieval Manuscripts," *Cataloging and Classification Quarterly*, 54,5-6 (2016): 338.

[12] Joy Humphrey, "Manuscripts and Metadata: Descriptive Metadata in Three Manuscript Catalogs: DigCIM, MALVINE, and Digital Scriptorium," *Cataloging & Classification Quarterly*, 45,2 (2007): 21.

[13] Eva Verona, *Pravilnik i priručnik za izradbu abecednih kataloga* (Zagreb: Hrvatsko bibliotekarsko društvo, 1983.-1986.)

[14] *ISBD: International Standard Bibliographic Description,* Consolidated edition (Berlin, Munchen: De Gruyter Saur, 2011). Prepublication version, accessed May 20 2018,

https://www.ifla.org/files/assets/cataloguing/isbd/isbd-cons_20110321.pdf.

[15] Digitization, bibliographic description and research of texts written in Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and

Maintenance of National Cataloguing Rules, 2014-2019, a joint project by library, archive, museum and academic communities.[16]

With the description of bound items being one of the toughest areas of manuscript description, and as a number of 'bound-withs' were found while working on the *Written Heritage* project, it has been decided to take the research into modelling data for the description of 'bound-withs' to further inform and support both projects for the case study of this paper.

'Bound-withs' and manuscript description

Although ISBD does not specify the requirements for the description of manuscripts, its definition of a 'bound-with' for printed resources can be found useful as a guiding one: "printed resource contained in a volume with one or more other resources that have been arranged and bound subsequent to publication."[17] As such, it differs from 'issued with', presenting, "a resource as arranged and issued by a publisher together with one or more other, different resources."[18] Reasons for binding single units after their publication vary from budgetary to conservational, sometimes even political.

The procedure for describing a 'bound-with' differs according to cataloguing rules, formats and information systems in use, but two basic methods are discernible in the cataloguing practice. The first one is that in which each item is described in a separate linked record with their physical description and other copy-specific information. The second method is the use of a note that identifies the component 'bound-withs' to the first item in an 'artificial' collection. It should be noted that, for some types of material,

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Šibenik area, a joint project of the Department of Information Sciences of the University of Zadar, Croatia and Vestigia Manuscript Research Centre of the University of Graz, Austria. Homepage, accessed May 20 2018, http://pisanabastina.unizd.hr/.

[16] "Production, Publishing and Maintenance of National Cataloguing Rules, 2014-2018," accessed May 20 2018, http://npk.nsk.hr/. The project is supported by the Ministry of Culture of the Republic of Croatia. The members of the project are the National and University Library in Zagreb, the Croatian Library Association, the Croatian State Archives, the Museum Documentation Center, the Croatian Natural History Museum, the Museum of Arts and Crafts, and three academic institutions – the University of Zagreb, Faculty of Humanities and Social Sciences, Department of Information and Communication Sciences, the University of Zadar, Department of Information Sciences, and the Josip Juraj Strossmayer University of Osijek, Faculty of Humanities and Social Sciences, Department of Information Sciences.

[17] *ISBD*, 260.

[18] Ibid., 268.

such as bound pamphlets or other ephemeral material, description is made collectively, at the collection level.[19]

ISBD prescribes that information on 'bound-withs' and their relationship should be given in a descriptive, unstructured way, in a note relating to the copy in hand (7.11). IFLA UNIMARC bibliographic format,[20] apart from providing a note field 316 *Note relating to the copy in hand* for recording descriptive unstructured information, provides a mechanism to express relationships between bound items. These are 481 and 482 linking entry data fields. The field 481 *Also bound in this volume* is used in the record for the first item in the collection, which contains as many repeated 481 fields as there are bound items, thus pointing to records describing subsequent 'bound-withs'. The records for items other than the first one, contain the field 482 *Bound-withs* which points to the record describing the first item in the collection, i.e., the first bound item. Coded information on 'bound-with' items is given in each record in 141 *Coded data field – Copy specific attributes*, and it is a one-character code indicating whether the copy in hand is a single item, or bound with one or more others.

This linking mechanism is being used in national practices to link description of the first bound item with the description of those following it. However, the practice of describing the collection of bound items as such, that is, the 'artificial' collection with its own characteristics, such as when, by who and where it was made, has not been recognized. This is primarily due to the fact that all items have their own title pages with author, title, publication, etc. information, and the first item's title page is considered the one from which to start the description. The UNIMARC bibliographic format, however, provides for collection level description: the record for the collection has in its *Record Label*, character position 7, code "c = collection–bibliographic item that is a made-up collection", while records for separate items can use upward linking data fields to link to the set record: 461 *Set*, the field "used to identify hierarchically linked items at the set level". A set is defined as "a group of physically separate items identified by a common title."

[19] Tinka Katić, *Stara knjiga: bibliografska organizacija informacija* (Zagreb: Hrvatsko knjižničarsko društvo, 2017), 82.
[20] *UNIMARC Manual: Bibliographic Format*, 3rd Edition. (Munchen: K.G. Saur, 2008), 22-23. UNIMARC updates, accessed May 20 2018, https://www.ifla.org/node/7974.

The entity-relationship conceptual model *Functional Requirements for Bibliographic Records (FRBR)*[21] published in 1997, implemented such a need for explicit description of bibliographic relationships within the bibliographic universe, that is, the relationships between bibliographic entities basing the focus of the model on user tasks. Tillett and Smiraglia, among others, published relevant research on the topic, which significantly influenced the definition of IFLA's conceptual models. [22] FRBR's successor, the *IFLA Library Reference Model: A Conceptual Model for Bibliographic Information* (IFLA LRM) [23] reconfirmed this. The IFLA LRM model is a high-level conceptual reference model published in 2017, which resulted from the consolidation of the three previously published models of the FR family (FRBR, FRAD[24] and FRSAD[25]). Its definition is fully self-contained, but it promotes further the FR family's stance and function as a guide to formulating cataloguing rules and implementing bibliographic systems.[26] IFLA LRM's design is based on entity-relationship

[21] *Functional Requirements for Bibliographic Records: Final Report*, September 1997. Current text, as amended and corrected through February 2009, accessed May 20 2018, https://www.ifla.org/files/assets/cataloguing/frbr/frbr_2008.pdf.

[22] Barbara B. Tillett, "Bibliographic relationships," in: *Relationships in the Organization of Knowledge*, ed. by Carol A. Bean, and Rebecca Green (Dordrecht: Kluwer Academic Publishers, 2001), 19-35; R. P. Smiraglia, "Derivative bibliographic relationships: Linkages in the bibliographic universe," in: *Navigating the Networks: Proceedings of the ASIS Mid-Year Meeting, Portland, Oregon, May 21-25, 1994*, ed. by D.L. Andersen, T.J. Galvin, and M.D. Giguere (Medford, NJ: ASIS, 1994), 115-135; Barbara B. Tillett, "A taxonomy of bibliographic relationships," *Library Resources & Technical Services*, 35(1991): 150-58.

[23] Pat Riva, Patrick Le Bœuf and Maja Žumer, *IFLA Library Reference Model: A Conceptual Model for Bibliographic Information* (International Federation of Library Associations and Institutions, August 2017). As amended and corrected through December 2017, accessed May 15 2018,
https://www.ifla.org/files/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017_rev201712.pdf.

[24] *Functional Requirements for Authority Data: A Conceptual Model,* Final Report December 2008. Current text, as amended and corrected through July 2013, accessed May 20 2018,
https://www.ifla.org/files/assets/cataloguing/frad/frad_2013.pdf.

[25] *Functional Requirements for Subject Authority Data (FRSAD): A Conceptual Model*, June 2010, accessed May 20, 2018,
https://www.ifla.org/files/assets/classification-and-indexing/functional-requirements-for-subject-authority-data/frsad-final-report.pdf.

[26] Maja Žumer, and Pat Riva, "IFLA LRM: Finally Here," in: *Advancing Metadata Practice: Quality, Openness, Interoperability: 2017 Proceedings of the*

modelling enhanced with hierarchical modelling expressed with the 'is a' (isA) relationship. IFLA LRM defines the entity *Res*, "any entity in the universe of discourse", as a superclass to which all other entities are in the isA relation of a subclass (Table 4-1), and which inherits all attributes and relationships defined at that level, such as attribute LRM-E1-A2 Note, and relationship LRM-R1 Res 'is associated with' Res. The model, being highly abstract, allows further refinements or granulation of its entities, attributes, and relationships, to carry more precise semantics of the data. It should be noted that the model is specifically defined as one that, "provide[s] a framework for the analysis of non-administrative metadata relating to library resources",[27] so any activity beyond the resource production is outside its scope.

Table 4-1. IFLA LRM Entity hierarchy with three-level entities[28]

Table 4.1 Entity Hierarchy		
Top Level	**Second Level**	**Third Level**
LRM-E1 Res		
--	LRM-E2 Work	
--	LRM-E3 Expression	
--	LRM-E4 Manifestation	
--	LRM-E5 Item	
--	LRM-E6 Agent	
--	--	LRM-E7 Person
--	--	LRM-E8 Collective Agent
--	LRM-E9 Nomen	
--	LRM-E10 Place	
--	LRM-E11 Time-span	

IFLA LRM defines a three-level entity hierarchy from LRM-E1 to LRM-E11 (Res, Work, Expression, Manifestation, Item, Agent (Person, Collective Agent), Nomen, Place and Time-span), a two-level hierarchical structure for attributes, and a two-level hierarchical structure for relationships following the entity hierarchy. The top level of the hierarchy for relationships is the LRM-R1 Res 'is associated with' Res, followed by

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International Conference on Dublin Core and Metadata Applications, 26-29 October 2017, DCMI, 2017, 16, accessed April 2 2018,
http://dcpapers.dublincore.org/pubs/ article/view/3852.
[27] *IFLA LRM*, 1.
[28] Ibid., 19.

relationships on the second level from LRM-R2 Work 'is realized through' Expression to LRM-R36 Time-span 'has part' Time-span. IFLA LRM identifies five user tasks for both bibliographic and authority data, namely 'find', 'identify', 'select', 'obtain' and 'explore'. The user task *Explore* directly addresses the concept of relationships, stating that users need "to discover resources using the relationships between them and thus place the resources in a context", with the comment that "to facilitate this task the information system seeks to **support discovery** by making relationships explicit, by providing contextual information and navigational functionality."[29]

Considering the fact that the 'bound-with' is a post-production resource, and thus falls outside the IFLA LRM scope, it is necessary to find a way to model it for the purposes of its description. The solution to this problem was found in the work by Pat Riva, one of the authors of the model, entitled "The IFLA Library Reference Model: *lectio magistralis* in library science."[30] Riva explains that from the point of IFLA LRM a 'bound-with' is created when specific *items* from several *manifestations* are physically bound together as a single object by a library, or by a former owner, and thus are considered to be administrative data and outside the model's scope. As the choice is made at the level of *items* involved, not at the level of their *manifestation*, other *items* from the same *manifestations* will generally not be bound together in the same combinations, and therefore, it cannot be considered simplistically as merely an administrative decision. Riva further explains that it is "the nature of the carrier [that] is an intrinsic aspect. Only carriers that can be physically assembled or attached, without any copying of content, into a new carrier can be 'bound with'." Thus, "the original *items* cease to function as independent objects, physically becoming part of a new combined object." [31] However, modelling 'bound-withs' can be very important in fulfilling the user task *obtain*, as "an end-user cannot consult any one of these *items* without also having the other items in the 'bound-with' in their possession, with the result that none of the other *items* in the 'bound-with' are available for other end-users to consult."[32]

One of the solutions proposed by Riva is to link *items* to an entity she calls Object3, with the use of relationship between *agent* and *item*, LRM-R11 Item 'was modified by' *agent*. The modifying relationship provides a

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[29] Ibid., 15.

[30] Pat Riva. *The IFLA Library Reference Model: lectio magistralis in library science = Il modelo concetualle IFLA Library Reference Model: lectio magistralis in biblioteconomia* (Fiesole (Firenze): Casalini Libri, 2018), accessed May 20 2018, https://www.torrossa.com/resources/an/4302108.

[31] Ibid., 27-28.

[32] Ibid., 28.

mechanism for recording *agents* responsible for the modifications that produced Object3, but does not give access to *manifestation* attributes, such as *extent* or *manifestation statement*, with which to record features specific to this new combined object. While Object3 is at least an instance of entity LRM-E1 Res, this only allows its features to be recorded in the general *note* attribute.[33] Riva contends that Object3 is not a new instance of the *item* entity, because no new *item* is created by the action of binding together.

The other solution Riva is offering comes from the PRESSoo model.[34] The PRESSoo model is a formal ontology intended to capture and represent the underlaying semantics of bibliographic information about continuing resources, as an extension of FRBRoo,[35] which in turn is an extension of the museum community conceptual reference model CIDOC CRM.[36] PRESSoo defines a class (or entity) Z9 Storage Unit as "unique combinations of instances of E18 Physical Thing that are bound together, or otherwise physically united, for the sake of preservation, and are communicated to library users as single, indivisible units." It is important that it is not focused only on individual items which are components of Z9 Storage Unit, but also on the binding itself, which, "can be a valuable piece of cultural heritage that is worth describing for its own sake."[37] In that way, Z9 Storage Unit can account indifferently for the description of the various material that make up a 'bound-with', and of the binding that was produced for it. Z9 Storage Unit can be put into relation to *items* to describe the number of actual physical pieces involved. When multiple *items* are attached together, as in the 'bound-with' case, multiple *items* correspond to a single storage unit. Riva concludes that although the *storage unit* concept is not declared in the high-level IFLA LRM model, in an application where it is needed it can be introduced as a sub-type of LRM-E1 Res.[38]

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[33] Ibid., 30.

[34] Patric Le Bœuf. *PRESSoo. Extension of CIDOC CRM and FRBRoo for the modelling of bibliographic information pertaining to continuing resources*. Version 1.2, January 2016. Approved by CIDOC CRM-SIG, accessed May 20 2018, https://www.ifla.org/files/assets/cataloguing/PRESSoo/pressoo_v1.2.pdf.

[35] *Definition of FRBRoo. A conceptual Model for Bibliographic Information in Object-Oriented Formalisam*, ed. Chryssoula Bekiari et al. Version 2.4, November 2015, accessed May 20 2018,
https://www.ifla.org/files/assets/cataloguing/FRBRoo/frbroo_v_2.4.pdf.

[36] *CIDOC-Conceptual Reference Model*. Version 6.2.3 (October 2017). Accessed May 20 2018. http://www.cidoc-crm.org/sites/default/files/2017-12-30%23CIDOC%20CRM_v6.2.3_esIP.pdf.

[37] *PRESSoo*, 31.

[38] Riva, *The IFLA Library Reference Model*, 31.

Riva's proposal for modelling description of 'bound-withs' is explored
in this study as a special application of the IFLA LRM conceptual model.

'Bound-with' manuscripts from Žman, Dugi Otok, Croatia

The basis for compiling a list of manuscripts for digitization of the
manuscripts of the Žman Parish, the parish of the village of Žman, on the
island of Dugi Otok, Croatia, within the *Written Heritage* project, was the
List of Glagolitic codices of Zadar Archdiocese by Pavao Kero, printed in
its 2nd edition in 2015.[39] In this catalogue, 541 Glagolitic codices, held in
different heritage institutions in Croatia and abroad, as well as in private
hands, are listed and described. Kero actually continued the work on
recording Glagolitic manuscripts of the Zadar area started by Vladislav
Cvitanović, Amose Rube Filipi, Ante Strgačić, Petar Vlasnović and Blaž
Jurišić in the 1950s.[40] Their lists of Glagolitic manuscripts differ in scope
and were published in eight different journals, which resulted in difficulty
in overviewing the Glagolitic heritage of the Zadar area.

In his *List of Glagolitic codices,* Kero lists twenty-eight Glagolitic
codices from Žman. Out of twenty-eight codices, sixteen make up part of
the Croatian Glagolitic Manuscript Collection of the Library of the Archives
of Zadar Archdiocese,[41] three are held in the Zadar State Archives,[42] eight
in the University Library in Split, and one in the Croatian Academy of
Sciences and Arts in Zagreb. All the manuscripts from Žman held in the
Library of the Archives of Zadar Archdiocese were selected for digitization.
During digitization and cataloguing, all codices were carefully examined
and assigned with administrative numbers designed for the *Written Heritage*
project. As manuscripts are usually listed by the place from where they
come, each place of a manuscript's origin is assigned a number (e.g., Žman
is assigned with number 74) and a sub-number, following the order they are
given in Kero's *List of Glagolitic codices*, thus establishing a unique
identifier for each manuscript. For example, Ms. Glagoljska matica
krštenih, 1652.-1668. [Glagolitic register of baptised, 1652-1668] is

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[39] Pavao Kero. *Popis glagoljskih kodeksa Zadarske nadbiskupije* (Zadar: Stalna
izložba crkvene umjetnosti, Sveučilište u Zadru, 2015)
[40] Ibid., 5-8.
[41] *HR-AZDN-43-Zbirka matičnih knjiga i parica matičnih knjiga Zadarske
nadbiskupije: Žman.*
[42] *HR-DAZD-378-Zbirka matičnih knjiga: Žman, HR-DAZD-373-Osobni arhivski
fond Ante Marija Strgačić (sig. 6.5.1.10.): Glagoljski kvateran crkve sv. Ivana
Krstitelja, 1757-1843.*

assigned number 74.4, identifying it as a manuscript with provenance from Žman, and that it is listed as the fourth manuscript in Kero's list.[43]
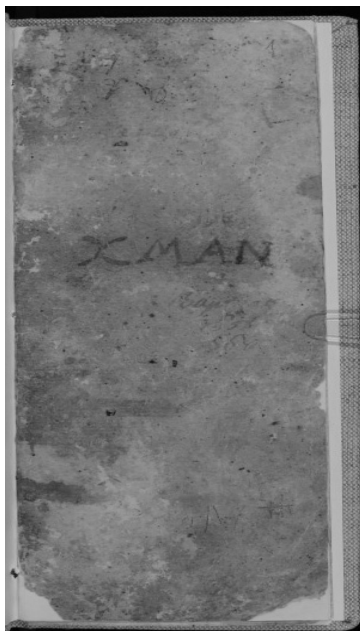
Figure 4-1. Manuscript of the "Xman" – Žman Parish, numbered Ms. 74.4 with the penned numeration of 1 on the top right corner of the cover of the Glagolitic Register of baptised, in the contemporary (restored) binding

The examination of Žman manuscripts showed usual codicological and palaeographical features, but unusual pagination. The pagination was found to be written mainly in the top right corner of the manuscript's pages. We noticed that the pagination of Ms. 74.4 starts with p.1 (Figure 4-1), while in other manuscripts, it starts with higher folio numbers. That brought us to a more detailed examination of pagination in all Žman manuscripts, and to the conclusion that the pagination is continuous through thirteen out of twenty-eight manuscripts, from p.1 to p.522. When ordered according to the pagination, the list of manuscripts compiled for the digitisation project is as follows: 74.4, 74.11, 74.3, 74.15, 74.8, 74.12, 74.16, 74.1, 74.2, 74.14, 74.6.

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[43] See more in: Erich Renhart, and Marijana Tomić. *Principles of work and guidelines: version 3.0*, accessed May 20, 2018,
http://pisanabastina.unizd.hr/?object=view&id=12682.

74.7, 74.10 (see Table 4-2 below). All the manuscripts are parish registers from the 17th century.

Further examination reveals various kinds of inscriptions in manuscripts made by previous cataloguers and researchers, such as notes in the bibliography of the manuscript. However, what first attracted our attention was an inscription made on the front pastedown (PDf) of Ms. 74.10,[44] where Kero wrote (Figure 4-2):

> D. V. Cvitanović noted that all registers were bound together, forming one volume. It is a pity that the Croatian State Archives unbound it during restoration and formed several volumes out of it.[45]

Kero did not mention which particular manuscripts were bound together, but his inscription took us to further research. We consulted the list of Glagolitic codices made by Vladislav Cvitanović in 1957, and published in the scientific journal *Starine,*[46] and found out that Cvitanović listed them by the order matching the one obtained according to the pagination in manuscripts. In this list, Cvitanović describes his finding, and quotes from a note he found in one of the manuscripts:

> All registers are in one volume, and on the last page – 522 – there is a note: 'Visto e consistente in pagine N.ro 522. Zara li 26 9bre 1827. Dall' I. Reg(i)o Capitanato Circolare'. Nonreadable signature and seal in red wax with Austrian state of arms – in Latin. All registers were hitched together with a leather ribbon. That is a reason why they were all saved until today."[47]

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[44] *Matica mrtvih, Žman, 1607.-1612*. Call number: HR-AZDN-43-Zbirka matičnih knjiga i parica matičnih knjiga Zadarske nadbiskupije: Žman, MKM 1607.-1612.
[45] *Matica umrlih, Žman, 1607.-1612*. P. PDf
[46] Vladislav Cvitanović, "Popis glagoljskih kodeksa u zadarskoj nadbiskupiji," *Starine*, 47 (1957): 197-221, accessed May 30 2018,
http://dizbi.hazu.hr/object/view/zmr3c8agjA.
[47] Ibid., 203.
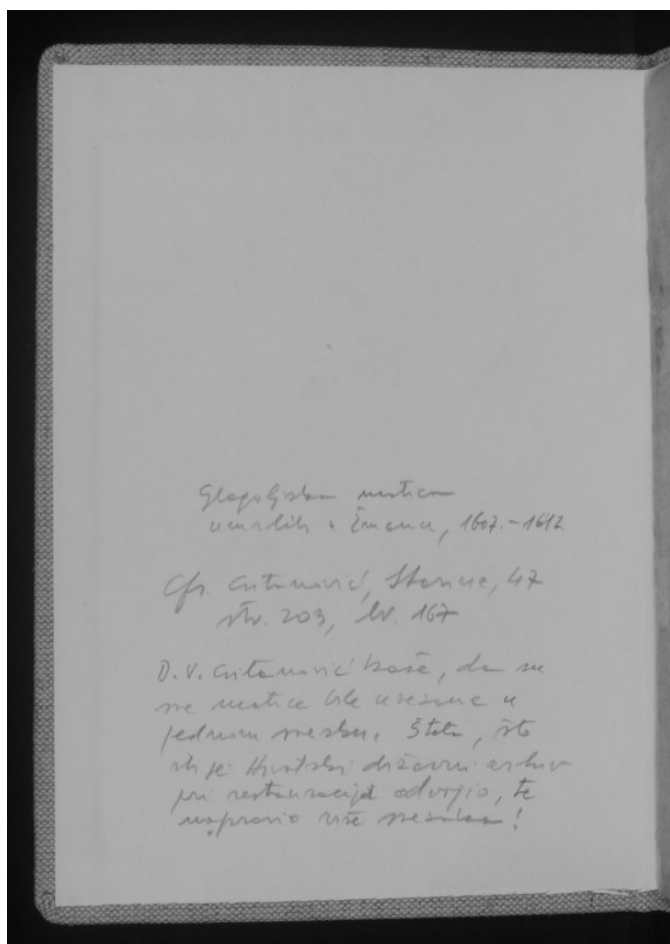
Figure 4-2. Handwritten note by don Pavao Kero on Ms. 74.10 about D. V. Cvitanović and the Croatian State Archives

Figure 4-3 shows an inscription, and the seal in red wax, with the Austrian state of arms described by Cvitanović, with the inscription "Žman" written subsequently by an unknown hand, as found in Ms. 74.10, p.522. Because we do not have any information that Cvitanović could have penned the pagination, we can only assume that it was made by the Austrian Government representative during the process of verification of registers;

however, further research should be made into Austrian customs of such a process to verify this.
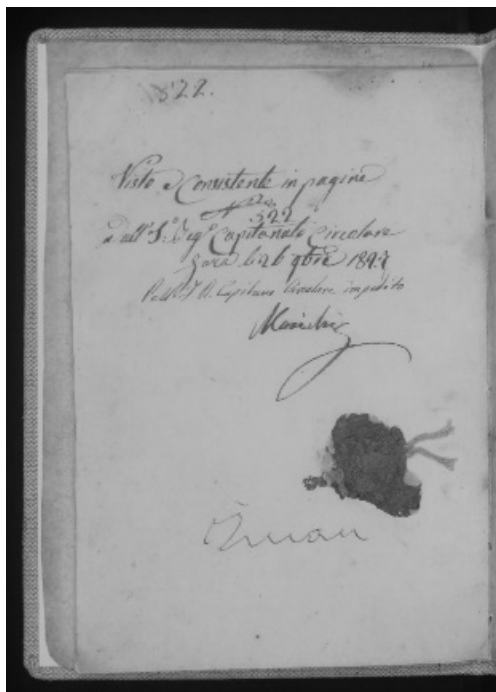
Figure 4-3. Ms. 74.10, p.522. Inscription and seal in red wax with the Austrian state of arms, with subsequently handwritten inscription "Žman"

Cvitanović's list of Glagolitic codices of the Zadar Archdiocese, published in 1957, and its comparison to Kero's list, as well as the study of the manuscript's inscription and penned numbering, brought us to some interesting conclusions concerning the rich history of the thirteen manuscripts of the Žman collection. The list and the inscription disclosed relationships among these manuscripts which are neither detectable from Kero's *List of Glagolitic codices* nor perceived in manuscripts in their contemporary state. It is to be concluded that the registers were examined, bound together, and verified by the Austrian Government for Dalmatia on 26 November 1827 (in the inscription, it is written 26 9bre 1827, where 9bre is to be read Nove[m]bre, coming from the word for number 9, *nove*, together with extension *bre*). Registers date from the 17th century, with

entries from the year of 1607 to 1694, and the pagination continues through all of them, disclosing the order in which they were bound. When Cvitanović described them in 1957, the registers were still bound, so he listed them individually according to the order in which he found them. Given that Cvitanović was not a librarian, it is hard to attribute his decision to describe each register separately to his familiarity with the, then agreed, practice of cataloguing 'bound-withs' in the Croatian library community. Therefore, it is more likely that his decision to do so was based upon several intuitive presumptions made by a scholar aware of the importance of listing, and thus identifying all 'bound-withs', as each of them represents an independent item important for national culture and history.

As registers are recorded according to their order in this 'artificial' collection of bound items, this order can be reconstructed. We, cannot however, consider Cvitanović's list to provide the *original order*, as those manuscripts, before being bound together, were independently created items. Furthermore, it is not even possible to determine the logic of the order of the bound items, as they are not consistently chronologically ordered, although the recursive order according to the type of registers can be roughly noted: register of baptised, confirmed, married, deceased, book of souls. This calls for further investigation into the Austrian administration practices and rules that were followed in the process of verifying documents. The thirteen bound Žman manuscript codices are shown in Table 4-2, ordered as listed by Cvitanović, followed by their title, penned pagination, and administrative number, assigned within the *Written Heritage* (WH) project.

Table 4-2. The thirteen 17th century manuscript codices from the Žman Parish (Dugi otok, Croatia) held within the collection of Glagolitic codices at the Library of the Archives of Zadar Archdiocese, as ordered in Cvitanović's list of bound items

Order of bound codices	Title	Penned pagination in codices	Administrative number assigned within *WH* project
1.	Glagoljska matica krštenih, 1652.-1668. Glagolitic register of baptised, 1652-1668	1-32	[74.4]
2.	Glagoljska matica umrlih, 1612.-1650. Glagolitic register of deceased, 1612-1650	33-80	[74.11]

3.	Glagoljska matica krštenih, 1613.-1649. Glagolitic register of baptised, 1613-1649	81-152	[74.3]
4.	Glagoljska matica krizmanih, 1618.-1663. Glagolitic register of confirmed, 1618-1663	153-196	[74.15]
5.	Glagoljska matica vjenčanih, 1651.-1668. Glagolitic register of married, 1651-1668	197-228	[74.8]
6.	Glagoljska matica umrlih, 1650.-1668. Glagolitic register of deceased, 1650-1668	229-252	[74.12]
7.	Glagoljska knjiga Stanje duša, 1670.-1694. Glagolitic book of souls, 1670-1694	253-396	[74.16]
8.	Glagoljska matica krštenih, 1607.-1610. Glagolitic register of baptised, 1607-1610	397-412	[74.1]
9.	Glagoljska matica krštenih, 1607.-1613. Glagolitic register of baptised, 1607-1613	413-468	[74.2]
10.	Glagoljska matica krizmanih, 1607. Glagolitic register of confirmed, 1607	469-476	[74.14]
11.	Glagoljska matica vjenčanih, 1607.-1613. Glagolitic register of married, 1607-1613	477-498	[74.6]
12.	Glagoljska matica vjenčanih, 1607.-1610. Glagolitic register of married, 1607-1610	499-506	[74.7]
13.	Glagoljska matica umrlih, 1607.-1612. Glagolitic register of deceased, 1607-1612	507-522	[74.10]

To return to Kero's cataloguing: as he obviously found the manuscripts in the 2000s unbound, he listed them in an order different from Cvitanović's, following the type of registers he set up for his catalogue: register of baptised, married, deceased, confirmed, and book of souls.

Today, Ms. 74.2, register of the baptized, 1607-1613,[48] and Ms. 74.14, register of the confirmed, 1607 [49] are still bound together. As these manuscripts follow each other in Cvitanović's list, we could not have found any other reason but to conclude that these two manuscripts stayed bound together 'by mistake' during the process of restoration, when the manuscripts were unbound to be restored, sometime in the 1980s in the Conservation and Restoration Laboratory of the State Archives, Zagreb,[50] whose stamp on each of the manuscripts confirms this (Figure 4-4). Kero informs us that no documentation was received with the restored manuscripts, so further investigation about the binding and the conservation-restoration decisions could be done in the archives of the laboratory. We cannot agree more with Kero's note, though, on the detriment of such a procedure of leaving eleven of them unbound, and two of them bound together.

To conclude: the history of Žman manuscripts, namely the information about which manuscripts, when and why they were bound together forming the 'artificial' collection, and the information on when and why they were unbound, that is, their contextualized lifecycle, can be reconstructed by the study of manuscripts together with the study of literature on previously compiled lists and catalogues, as well as bibliographies of those manuscripts. As it turns out, these lists, etc., printed in scientific journals dating back to the 1950s, are rather 'hidden' from contemporary researchers and information specialists, but not to a certain generation of humanities scholars researching Glagolitic manuscripts from the Zadar area. This brings us to further conclude that the knowledge of humanities scholars, and the results of their research, bring important information to the historical context of manuscripts, and, as such, should be incorporated, whenever available, into the bibliographic description. In our case, the digitization project and subsequent research into the physical and content aspects of the material in question, as well as into published bibliographic sources,

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[48] *Matica krštenih, Žman, 1607-1613.* Call number: HR-AZDN-43-Zbirka matičnih knjiga i parica matičnih knjiga Zadarske nadbiskupije: Žman, MKK 1607.-1613.
[49] *Matica krizmanih, Žman, 1607.* Call number: HR-AZDN-43-Zbirka matičnih knjiga i parica matičnih knjiga Zadarske nadbiskupije: Žman, Matica krizmanih, 1607.
[50] The name of the State Archives, Zagreb, changed to the Croatian State Archives.

resulted in information on the rich and interesting historical relations within the thirteen Žman manuscripts.
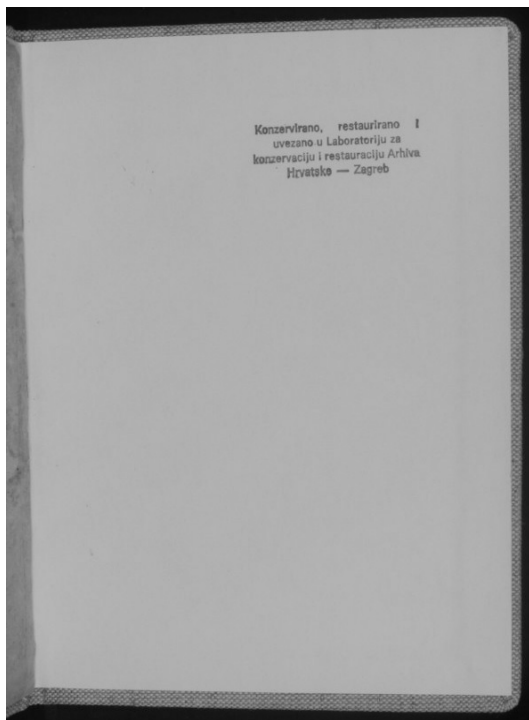
Figure 4-4. Restoration stamp by the Croatian State Archives: Treated, restored and bound in the Conservation and Restoration Laboratory of the State Archives, Zagreb

To leave all this information out of the catalogue record would be a significant loss for current and future users, as it provides them with important data. First, the fact that manuscripts were confirmed by the Austrian Government, warrants their authenticity and the trustfulness of their content. Second, the fact that during part of their history, the registers belonging to the same century were authorised by the official wax seal of the Austrian Government. This procedure additionally gives evidence on the history of the Austrian Government and the methods of Austrian administration protocols in Dalmatia in the 19th century. Finally, the information on the unbinding process gives some indication of the

restoration procedures used in the 1980s by the Conservation Laboratory of the Croatian State Archives.

How can one translate this narrative into a cataloguing record?

Requirements for modelling history of the thirteen bound Žman manuscripts

In conceptualizing bibliographic information organisation for 'bound withs' required for implementation in the two projects, we decided to place their modelling within the IFLA LRM reference model, enhanced with PRESSoo class Z9 Storage unit. The modelling, which has to take into consideration the five mentioned user tasks, requires the following three stages: first, description of each item in the collection; second, description of the collection of 'bound-withs' or the 'artificial' collection as an object in itself; and third, defining relationships among them.

For conceptualizing the data model for description of the item, we have chosen as its instance Ms.74.4 Glagoljska matica krštenih, 1652.-1668. [Glagolitic register of baptised, 1652-1668]. We know that the Parish of Žman, LRM-E8 Collective agent ("a gathering or organization of *persons* bearing a particular name and capable of acting as a unit") was "responsible for the creation of intellectual or artistic content" LRM-E2 Work: LRM-R5i Agent "created" Work, with its *expression* LRM-E3 ("a distinct combination of signs conveying intellectual or artistic content")[51] written in Croatian: LRM-E3-A6 Language. We also know that the notary who recorded the data in the registry was Stipan Fatović (Figure 4-5), a fact which can be expressed as a relation between LRM-E4 Manifestation and LRM-E7 Person: LRM-R7 Manifestation 'was created by' Agent.[52] We can describe the *manifestation* ("a set of all carriers that are assumed to share the same characteristics as to intellectual or artistic content and aspects of physical form") with attributes such as "a type of material to which all physical carriers of the *manifestation* are assumed to belong" – LRM-E4-A1 Carrier: paper, "a quantification of the extent observed on a physical carrier", LRM-E4-A2 Extent: 1 + 32 + 1 pp., and "a statement appearing in exemplars of the *manifestation* and deemed to be significant for users to

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[51] The basic relationship of the IFLA LRM between *work*, *expression*, *manifestation* and *item* is not specifically dealt with here; for their understanding they are: LRM-R2 Work 'is realised though' Expression, LRM-R3 Expression 'is embodied in' Manifestation and LRM-R4 Manifestation 'is exemplified by' Item.

[52] It should be noticed that such a relation is valid: LRM-E7 Person and LRM-E8 Collective agent are subclasses of LRM-E6 Agent, and thus inherit all attributes and relationships from their superclass, implying a shortcut.

understand how the resource represents itself" – LRM-E4-A4 Manifestation statement: XMAN (Figure 4-1). We also want to say that this *manifestation* was created in Žman in the period from 1652 to 1668; to do that we can use "the entity subclass/superclass structure (isA hierarchy) […] in a path to restrict the domain or range entities in a relationship."[53] Thus, the pair of statements:

(isA)   MANIFESTATION isA RES
(LRM-R33)   RES 'is associated with' PLACE
imply the shortcut relationship:
        MANIFESTATION 'is associated with' PLACE.

A similar shortcut relationship can be developed for the time period, i.e., entity LRM-E11 Time-span – LRM-R35 Res 'is associated with' Time-span, i.e., Manifestation 'is associated with' Time-span. To pinpoint the time-span for this item, we use the entity's attributes: LRM-E11-A1 Beginning – 1652, and LRM-E11-A2 Ending – 1668.

These two relationships for place and time-span are not specific for manuscript description only, and can be implemented in the application specifications as a general requirement for the design of a library system.

To state that the manuscript was written in cursive (handwritten) Glagolitic script, we can use the mechanism of inheriting attributes from the higher-level entity – LRM-E1 Res, in this case LRM-E1-A2 Note, with defining sub-attribute note for script for LRM-E7 Manifestation. This sub-attribute is also considered to be a general requirement for the design of a library system and not specific for this application.

What do we want to say about the *item* LRM-E5, as "an object or objects carrying signs intended to convey intellectual or artistic content"? We want to say that it is "held, stored, or made available for access" in "the collection and/or institution" – LRM-E5-A1 Location: Croatian Glagolitic Manuscript Collection of the Library of the Archives of Zadar Archdiocese, and/or that it is in the custodianship of this specific *agent*, the Archives of Zadar Archdiocese in order to link the *item* to it for further information about the *agent*. We use the relationship – LRM-R10 Item 'is owned by' Agent.

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[53] *IFLA LRM*, 61.
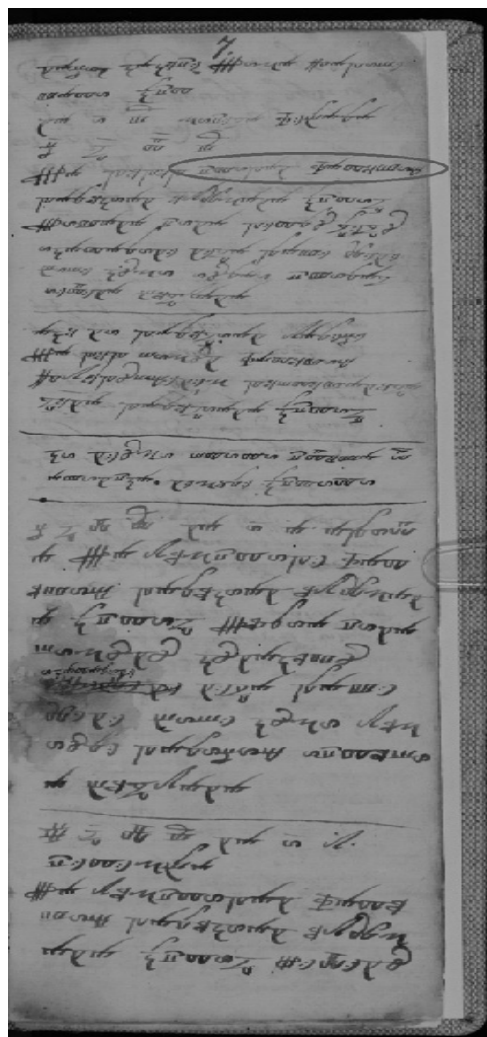
Figure 4-5. Notary Stipan Fatović who recorded the data in the registry Ms.74.4 Glagoljska matica krštenih, 1652.-1668. [Glagolitic register of baptised, 1652-1668]

However, we also want to say something about the manuscript's history: that it was bound in the 'artificial' collection together with the twelve other Žman manuscripts of the 17th century by the Austrian Government representative in 1827, and subsequently unbound by the Conservation and

Restoration Laboratory of the State Archives, Zagreb in the 1980s. Moreover, we want to indicate that in the 1980s, during the conservation-restoration process of unbinding the manuscripts, two of them, namely Ms.74.11 Glagoljska matica umrlih, 1612.-1650. [Glagolitic register of deceased, 1612-1650], pages 33-80 and Ms.74.14 Glagoljska matica krizmanih, 1607. [Glagolitic register of confirmed, 1607], pages 469-476 were bound together, and as such, can be obtained today.

IFLA LRM relationship LRM-R11 Item 'was modified by' Agent, enables us to say that this particular *item* was eventually rebound and restored by the *agent* – the Conservation and Restoration Laboratory of the State Archives, Zagreb, but not that it was part of the event of a particular 'artificial' collection history. Namely, the definition of the LRM-R11 relationship is that it "links an *item* to an *agent* that made changes to this particular *item* without creating a new *manifestation*. Examples include adding annotations, […] rebinding, restoration"; and the act of binding *items* together **is** creating a new object (*manifestation*), while the act of unbinding **is** deconstructing a particular object (*manifestation*).

So how can we link an *item* to a "new" object – *manifestation*? What is this 'new' *manifestation*? How was it created, and what are its characteristics?

To turn to FRBRoo for a solution does not help in this instance, however. Namely, to express the action or event of binding FRBRoo defines only the link between 'bound with' *items* – Item: has reconfiguration / is a reconfiguration of ('bound with'), that is, it expresses the same linking mechanism as we have referred to in the customary use of UNIMARC format data fields. This relationship is expressed by F5 Item P16 was used for F5 Item.[54] We can also express *item* to *item* relationship within IFLA LRM by the use of relationship LRM-R1 Res 'is associated with' Res which is inherited by the *item*: Item 'is associated with' Item, and by defining a sub-relationship: Item 'is bound with' Item. This is definitely an important relationship to record, and should be recorded, but there is a question of recording time and place of the act of binding! Thirteen *items* were being bound together, relationship P16 or LRM sub-type relationship, during a particular time-span in the past, while two of them are found 'bound-with' today. Given that IFLA LRM is not an event-aware model, it is expected that these events or actions would be more properly dealt with within IFLA LRMoo, object-oriented and event-aware model, which development is in progress.[55]

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[54] For full development of this relationship, see *FRBRoo*, 150-151.
[55] Pat Riva, and Maja Žumer, „FRBRoo, IFLA LRM, and now IFLA LRMoo: a cicle of development" (paper presented at the IFLA World Library and Information

As we have already argued for the need to describe this 'new' *manifestation* that forms the 'bound-withs' or 'artificial' collection, as such, we can resort to Riva's introduction to the IFLA LRM model of the entity Z9 Storage unit for this particular application.[56] Riva's solution is to treat this entity as a sub-type of LRM-E1 Res. However, we argue here for the need to describe it as to its characteristics, similar to those specified for the *manifestation,* as such, so the solution to declare it as a sub-type, or sub-entity/subclass of *res* seems unsatisfactory. Namely, as the isA hierarchical relation assumes that subclasses inherit all attributes and relationships defined at the level of their superclass, the vice versa is not valid: the entity Z9 Storage Unit would inherit only those attributes and relationships defined for the LRM-E1 Res, but not those for the LRM-E4 Manifestation. Therefore, we should declare the Z9 Storage Unit as a sub-entity or subclass of the entity LRM-E4 Manifestation to inherit any of its attributes and relationships, with additionally declaring those specific for the *storage unit* itself, such as a note on binding attribute: "hitched together with a leather ribbon". As a further refinement of describing the material in question, we can introduce FRBRoo's F4 Manifestation Singleton class: this class was introduced in the FRBRoo model as a result of splitting FRBR Manifestation entity into F3 Manifestation Product Type and F4 Manifestation Singleton.[57] F3 is defined as the class that "comprises definitions of publication products",[58] while F4 as the one that "comprises physical objects that each carry an instance of F2 Expression, and that were produced as unique objects, with no siblings intended in the course of their production. […] Examples of instances of F4 Manifestation Singleton include manuscripts, preparatory sketches and the final clean draft sent by an author or a composer to a publisher."[59] Thus we can say that this particular *storage unit* comprises a certain number of unique *items*, but that it is also an F4 Manifestation Singleton itself!

The 'artificial' collection of the thirteen Žman manuscripts – Z9 Storage Unit1 can be therefore described with *manifestation* attributes: LRM-E4-A1 Carrier: paper, LRM-E4-A2 Extent: 13 pieces, and with a devised title according to "transcription conventions […] codified by each

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Congress, Kuala Lumpur, Malaysia, August 24-30, 2018), accessed August 29, 2018, http://library.ifla.org/2130/1/074-riva-en.pdf.

[56] We would like to note that the introduction of the entity *storage unit* is not specific to this application, and should be implemented as a general feature of an information system.

[57] *FRBRoo*, 18-19.

[58] Ibid., 56.

[59] Ibid., 57.

implementation" – LRM-E4-A4 Manifestation statement: Parish of Žman registries, 1607-1668, as well as note on the script, and the already mentioned note on binding, specific to the *storage unit* subclass. As in the case of describing a link between place and time-span, and *manifestation*, we can use relationships Manifestation 'is associated with' Place: Zara, and Manifestation 'is associated with' Time-span: beginning 1827-11-26 and ending 1980s, as it existed during that period of time. This information can also be given as a part of *manifestation statement* defined sub-attribute, with further explanation, if needed, in the newly declared note on manifestation statement attribute.

The Z9 Storage Unit1 as a subclass of *manifestation*, which is also a F4 Manifestation Singleton itself, has to be further described as required by the model. The creator of the (one) *work* that was realised through (one) *expression* which itself was embodied in the (one) *manifestation*, that is, one *storage unit* was LRM-E8 Collective agent: I. Reg(i)o Capitanato Circolare, Zara. The relationship LRM-R5i Agent 'created' Work describes this. To describe the language of the *expression* LRM-E3 of this particular *storage unit* – LRM-E3-A6 Language "a language used in the *expression*" is Italian: "Visto e consistente in pagine N.ro 522. Zara li 26 9bre 1827. Dall' I. Reg(i)o Capitanato Circolare." To fully describe the *work-expression-manifestation-item* stack required by the model, we need to say that this Storage unit 'is exemplified by' Item, LRM-R4 *manifestation* to *item* relationship, and describe that *item*, which 'exemplifies' the *storage unit*: LRM-R4i. We can **assume** that it was "held, stored, or made available for access" in "the collection and/or institution" – LRM-E5-A1 Location: Croatian Glagolitic Manuscript Collection of the Library of the Archives of Zadar Archdiocese, and that it was in the custodianship of the Archives of Zadar Archdiocese in which all manuscripts of the collection were found. To state this, we use the relationship – LRM-R10 Item 'is owned by' Agent.

The Z9 Storage Unit2 – the two bound items that are available today – should be described following the same procedure, except that we have factual data about the *item* of the *storage unit2*.

The third, final, step is to relate the thirteen *items* to respective *storage units* by the newly defined relationships: Item 'was bound in' Storage Unit, and the reverse relationship Storage Unit 'has bound' Item. Each of the thirteen items could be thus linked to the Z9 Storage Unit1 which is described as to its lifecycle, and the two of them also to Z9 Storage Unit2, which still exists at the time of their description. This can be again defined by sub-typing relationship LRM-R1 Res 'is associated with' Res. We should be aware, however, that the binding relationship between *items* –

FRBRoo P16, is a different one from the relationship between an *item* and a *storage unit*!

What we have not stated yet are who the *agent* who performed the 'unbinding' of the Z9 Storage Unit1 was, or when the unbinding took place. Information about restoration of each particular *item* does not necessarily imply that something also happened to the *item* of the *storage unit* itself, as it could have been restored sometime in the past (although we have no indication about that in this particular instance). Therefore, to describe the event of an unbinding process we can develop a new sub-type relationship to LRM-R1: Item (of the *storage unit*) 'was unbound by' Agent, in this instance the Conservation and Restoration Laboratory of the State Archives, Zagreb.

To summarize: we find that modelling the complex history of a manuscript lifecycle would benefit from further research into extending IFLA LRM with PRESSoo and/or FRBRoo (CIDOC CRM) concepts, including what we can expect from the work in progress on the IFLA LRMoo, specifically in providing methods for event-aware modelling. We also expect that research into the International Council on Archives (ICA) *RiC: Records in Contexts* conceptual entity-relational model[60] could offer some insights on dealing with this issue, as manuscripts are not objects specific to library holdings and users only.

Concluding remarks

This paper focuses on defining requirements for modelling bound items – 'bound-withs' and their lifecycle – on the example of the thirteen Žman Glagolitic manuscripts from the 17th century, with emphasis on modelling the 'artificial' collection of those items as an object of its own.

In this exercise we found out that Riva's proposal to introduce PRESSoo class Z9 Storage unit was focal to the intent of modelling, yet her proposal as how to declare it in the model was not. We have also found that the event-aware model FRBRoo enables modelling of activities and events that happened over time and across the place. In this respect we expect the resolution of described issues in the further development of IFLA LRM, specifically its object-oriented declaration, IFLA LRMoo. We did not research further the possibility of modelling *storage unit* within the IFLA LRM modelling of aggregates because such a concept and subsequent

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[60] *Records in Contexts: A Conceptual Model for Archival Description*, Consultation Draft v0.1, September 2016 ([The Hague]: International Council on Archives, Expert Group on Archival Description, 2016), accessed May 20 2018, https://www.ica.org/sites/default/files/RiC-CM-0.1.pdf.

definitions run contrary to the concept of the *storage unit* as an 'aggregate' of *items – aggregate storage unit*, specifically, aggregate of unique *items* in a post-production event. Namely, IFLA LRM, in accordance with dealing with "non-administrative metadata relating to library resources", defines aggregate as "a *manifestation embodying multiple expressions*", with three distinct types identified to exist: aggregate collections of expressions, aggregates resulting from augmentation, and aggregates of parallel expressions.[61]

There are more examples illustrating the importance of proposed modelling. One of them is shown by a fragment pasted on the paste down of the thirteenth manuscript in the described Žman 'bound-withs'– Ms.74.10 Glagoljska matica umrlih, 1607.-1612. [Glagolitic register of deceased, 1607-1612] (Figure 4-6). Research of that fragment shows that it is a title page of some former 'artificial' collection, potential Z9 Storage Unit3. On that fragment, titles of three manuscripts are recorded:

> ZM[A]N
>   I. Bapti. 1658 usp. ad 166[?]
>   II. Bapti. 1618 usp. ad 1658
>   III. Matr. 1651 usp. ad 1668.

Two of the listed manuscripts are nowadays unknown, while the third one is most probably Ms.74.8 Glagoljska matica vjenčanih, 1651.-1668. [Glagolitic register of married, 1651-1668]. It could be assumed that the fragment was found in one of the thirteen Žman manuscripts, and that during the restoration process it was pasted down on the last page of the last bound manuscript, just in order to preserve it, as, probably, there was no time and/or required resource available for the research into its origin.

Having the possibility to describe an 'artificial' collection as such, enables us to describe even one existing collection based on the found fragment, and to relate it to the description of *item* – the manuscript in which the fragment was found, in our case, pasted in, as well as to the manuscripts that once were part of it, if identified.

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[61] *IFLA LRM*, 93.
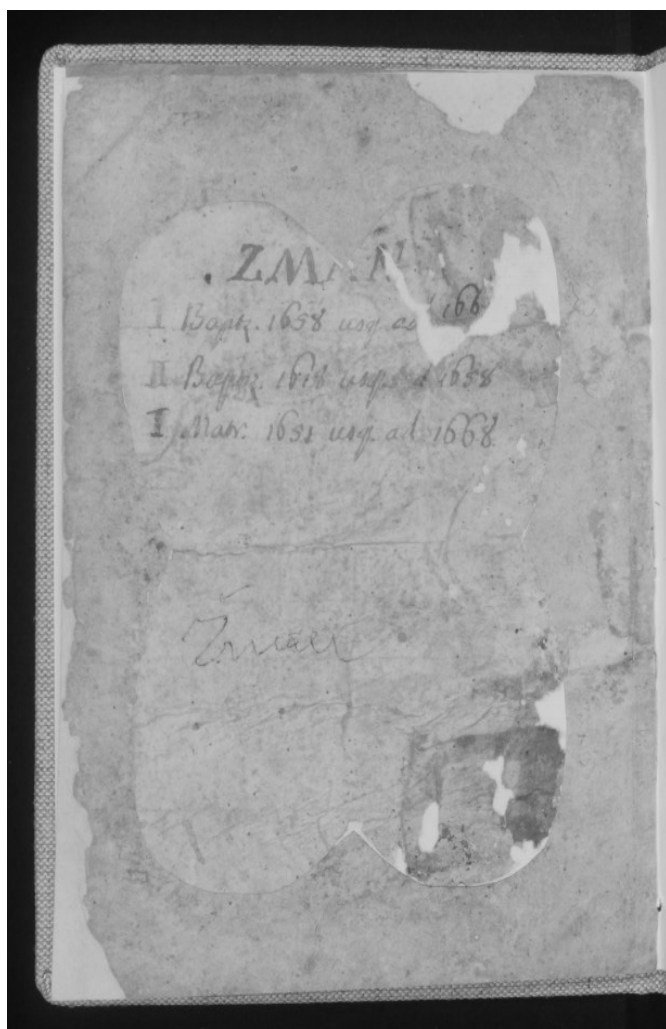
Figure 4-6. Fragment of the former 'bound-with' pasted on the paste down of the thirteenth manuscript in the described 'bound-with' – Ms.74.10 Glagoljska matica umrlih, 1607.-1612. [Glagolitic register of deceased, 1607-1612]

The research of the thirteen Žman Glagolitic manuscripts draw us to the following general conclusions related to manuscripts and their use:

- manuscripts are the subject of research in various humanities disciplines, such as palaeography, codicology, heritology, art history, etc., but also in social and other scientific disciplines;
- humanities scholars are one of the primary users of libraries, archives and museums with manuscript holdings, and these institutions have to accommodate to their users' research and scientific needs;
- digitization of manuscripts in heritage institutions has an important role in digital humanities;
- library community shows high level of interest in the growth of digital humanities;
- bibliographies, catalogues and lists of manuscripts as well as bibliographies on manuscripts are valuable sources of information on the history and provenance of described material and should be consulted when cataloguing manuscripts;
- manuscript catalogues should meet the five user tasks defined by the IFLA LRM model: find, identify, select, obtain and explore;
- manuscript catalogues should serve as the starting point for research in the emerging field of digital humanities, and, as such, should offer additional capabilities like structured metadata appropriate for data-mining or advanced search carried out by special users and navigation through the catalogue;
- elements of manuscript description, whether descriptive or authority data, should be expressed in a manner suitable for humanities scholars to download, harvest, and ingest, in various software tools, enabling users to re-use, visualize, etc. that data;
- the knowledge of humanities scholars and the results of their research provide important information on the historical context of manuscripts, and should be incorporated into catalogues whenever available, as it brings comprehensive knowledge on history and context of manuscripts.

Concluding remarks on the 'bound-withs' are as follows:

- information on a 'bound-with', that is, items bound in an 'artificial' collection is, in present practices, explicit, i.e., each item is described as a unit in itself;
- information on the relationship between items bound in an 'artificial' collection is, in present practices, expressed in textual form

(descriptive note), and/or with an explicit link between the first bound item in an 'artificial' collection and the ones following it;

- description of 'bound-withs' is an important issue concerning rare book and manuscript description, and, as such, requires its own modelling as an event-based concept;
- as information on 'bound-withs' forming an 'artificial' collection, being a post-production resource, is considered to be administrative data, and, as such, outside the scope of the IFLA Library Reference Model (IFLA LRM), the primary model used for conceptualizing data, the solution is proposed in introducing PRESSoo class Z9 Storage Unit as a sub-type of LRM-E4 Manifestation and FRBRoo F4 Manifestation Singleton, and in applying IFLA LRM isA hierarchical modelling or refinements to expand on required specialised relationships and attributes;
- further insight into modelling 'bound withs' and 'artificial' collections as their storage units is expected from the development of IFLA LRMoo, object-oriented version of LRM, i.e., IFLA LRM extension of CIDOC CRM, and the final version and ontology of the archival model *Records in Contexts*;
- once established relationships between 'bound-withs' themselves, and between a bound item and its storage unit – 'artificial' collection, as well as between those and the agents responsible for 'binding' events, which are further related to place and time, form the bases for applying linking data technology of the semantic web[62] and graph representation; that implies that each of these entities is a 'Thing' (Res) in itself, with its own attributes and relationships, and, as such, exposed as topic of interest for human and/or machine consumption.

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https://www.ifla.org/files/assets/cataloguing/FRBRoo/frbroo_v_2.4.pdf.

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[62] Mirna Willer and Gordon Dunsire, *Bibliographic information organization in the Semantic Web* (Oxford: Chandos, 2013).

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CHAPTER 5

DEVELOPING THE ONTOLOGICAL MODEL FOR RESEARCH AND REPRESENTATION OF COMMEMORATION SPEECHES IN CROATIA USING A GRAPH PROPERTY DATABASE

BENEDIKT PERAK

Abstract

This paper demonstrates the ontological model of commemoration speeches given in Croatia which was developed as a part of the project "Framing the Nation and Collective Identity in Croatia: Political Rituals and the Cultural Memory of Twentieth Century Traumas". The research gathers linguistic, media and social data about seven commemoration practices connected to the wars of the 20th century, using various methodologies involving audio-visual field recordings, transcriptions of commemoration speeches, and the creation of a text corpus. This chapter presents the digital humanities methods used to connect various levels of data analysis and digital resources, from natural language processing (NLP) of Croatian, to conceptual enrichment through the processing of conceptual metaphors. These resources are integrated using the Neo4j database and the Python Py2Neo library, for data manipulation of the ontological model that embeds the linguistic and media research in the context respectively of the social identity of actors, their interaction, institutional affiliations, and the cultural models they represent and express. The value of this ontological model is in fostering an interdisciplinary approach through the contextualization of data and targeted usage of digital resources.

Keywords: cultural memory, commemoration, textual analysis, monument representation, social ontology, complex system, graph database, Neo4j

Introduction

This paper shows the methods and resources used for the digitization of commemoration speeches given in Croatia and the development of an ontological model for the retrieval and analysis of the complex socio-cultural data within the project "Framing the Nation and Collective Identity in Croatia: Political Rituals and the Cultural Memory of Twentieth Century Traumas" (FRAMNAT).[1] The FRAMNAT project seeks to develop digital humanities methodologies applicable for research on cultural memory and socio-cognitive linguistics analysis. The research involves gathering linguistic, media, and social, data about commemoration practices connected to the traumatic events and atrocities of the 20th century wars: Jasenovac, Bleiburg, Brezovica and Jazovka, Srb, Knin and Vukovar. The paper presents the procedures of audio-visual and textual data gathering, as well the digital humanities methods used to store and enrich various levels of data analysis using the property graph database model and resources for natural language processing of Croatian, as well as data integration and information enrichment.

The motivation for the development of digital methods and tools to study state remembrance practices is to institute an empirical method of cultural memory research, as well as to offer resources and methods to other researchers of cultural memory in the region and beyond. The systematic analysis, from fieldwork at the sites of memory to studying the social networks, and the role of media in transmitting narratives, provide an insight into the construction of a society's 'collective memory'. Although commemorations and political speeches are not the only communication strategies used in constructing a story of the recent past, commemorations provide a highly visible stage for political elites and other memory actors to re-perform and conceptualize the past, and define their political agendas within that frame. We identified seven commemorations that were relevant because they either attracted the country's political leadership and were of national significance, or were particularly controversial and therefore provoked debates that would reveal how various actors framed the nation through rival 'truths' about the past. Five commemorations are related to the Second World War: Bleiburg, Brezovica, Jazovka, Jasenovac and Srb. The

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two other commemorations represent both the victim and victor narratives of the Croatian War of Independence (referred to as the Homeland War, or *Domovinski rat*, in Croatia): Vukovar and Knin. During the course of three years (2014-2017), the members of the FramNat research team gathered audio-visual evidence of the public speeches delivered at the seven commemorations. The speeches were transcribed, tokenized, morphosyntactically tagged, lemmatized, and syntactically parsed using the Reldi service,[2] and then published as a searchable corpus. By studying the data provided by the analyses of the corpus, we offer conclusions about the conceptual representation and cultural distribution of collective (national) identities in discourse and in official narratives of the past. The main questions that are addressed include the following: what salient concepts and mappings are applied by the speakers to frame conceptualizations of the nation and national identity? What are the differences in framing the nation and national identity between different political actors, institutions, and options? Who are the individuals, organizations and institutions that produce dominant models of representing cultural memory, how, and why? One of the objectives of this chapter is to provide insights into the methods and processes that were involved in gathering and analyzing information on the memory agents and their role in commemorative speeches. The second section of the chapter discusses the methods and resources used for the gathering and storing of data, while the third section demonstrates some of the analytic uses of the data for research into the conceptual framing methods.

Gathering the data about the commemorations

The FRAMNAT project gathered empirical data about seven commemoration practices connected to the wars of the 20th century: Jasenovac, Bleiburg, Brezovica and Jazovka, Srb, Knin and Vukovar, using various methodologies involving audio-visual field recordings, transcription of commemoration speeches, and the creation of a text corpus.

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[2] Nikola Ljubešić, Filip Klubička, Željko Agić, and Ivo-Pavao Jazbec, „New Inflectional Lexicons and Training Corpora for Improved Morphosyntactic Annotation of Croatian and Serbian," in: *Proceedings of the Tenth International Conference on Language Resources and Evaluation (LREC 2016)*. Portorož, Slovenija: European Language Resources Association (ELRA), 2016: 4264-4270.

Socio-cultural data about the speakers in the commemorations

Most of the commemorations involve a public speech delivered by the speaker, who acts as a memory agent. The speaker's role is to conceptualize the historical traumatic event by captivating the attention and raising the motivation of the listeners, while at the same time providing reasoning patterns and establishing culturally normative values.[3] The conceptualization is performed by the speech delivered by a speaker and addressed primarily to the assembled audience at the commemoration site, and secondarily to the wider national audience through media coverage. Most of the speakers are connected with some institution or organization, such as the Croatian Parliament, President, or Government, as well as other social organizations such as the Catholic, Orthodox church, Anti-fascist organizations, veteran organizations, etc., which partake in the political agenda of the commemoration. The network of the sixty-four speakers who delivered speeches at seven commemoration sites from 2014-2016 is represented in Figure 5-1.

The layout of the graph is produced by connecting a speaker to the commemoration site where the speech was delivered. The majority of the speakers have delivered speeches at only one commemoration site, but some of them, mostly high-ranking political officials, have appeared at several commemorations, such as the former president Ivo Josipović, who delivered speeches in Knin, Brezovica, and Jasenovac, as did former Prime Minister Zoran Milanović. Kolinda Grabar-Kitarović, elected president in January 2015, and appeared as a speaker in Knin and Brezovica. Cardinal Josip Bozanić, and other members of the Catholic Church, also appeared at several commemorations, including Knin, Vukovar, and Bleiburg. The following three networks represent the presence of the speakers on a yearly basis from the year 2014 (Figure 5-2), 2015 (Figure 5-3), to 2016 (Figure 5-4).

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[3] Pavlaković, Vjeran, and Perak Benedikt, "How Does This Monument Make You Feel? Measuring Emotional Responses to War Memorials in Croatia," in: *The Twentieth Century in European Memory: Transcultural Mediation and Reception*, ed. by Barbara Törnquist Plewa, and Tea Sindbæk Andersen (Leiden; Boston: Brill, 2017), accessed April 22, 2018, DOI:
https://doi.org/10.1163/9789004352353.
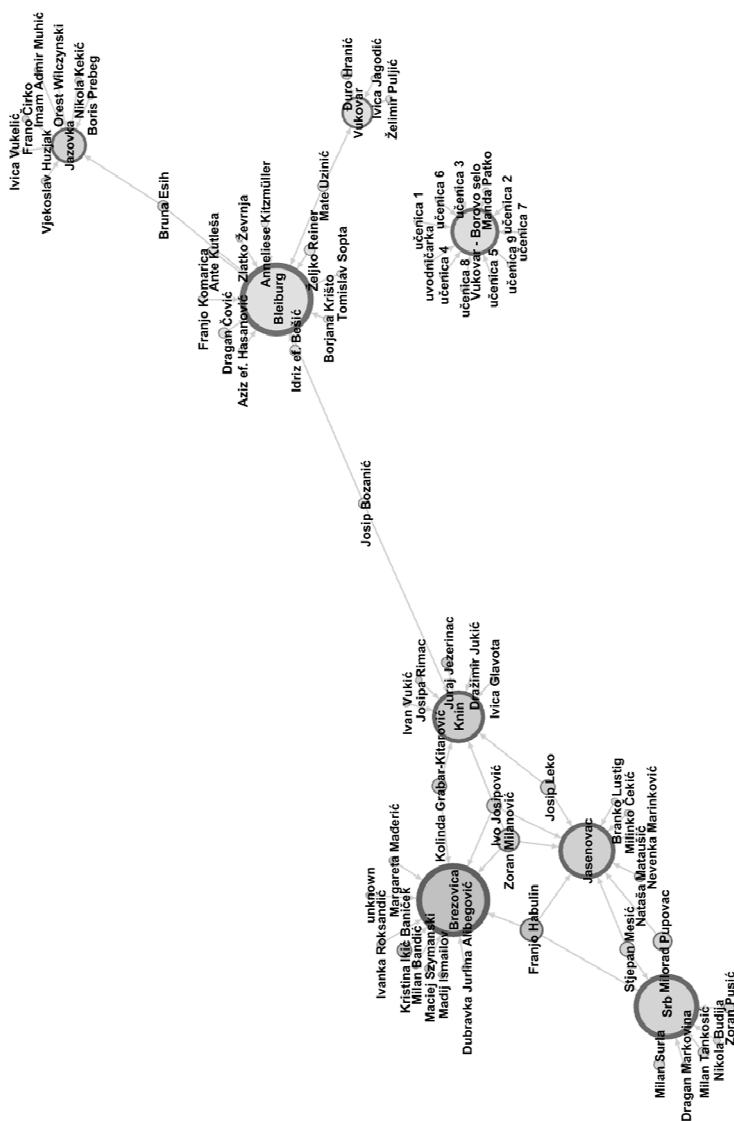
Figure 5-1. Network representation of the speakers at each commemoration. The size of the nodes is represented relative to the amount of connections with other nodes (degree)
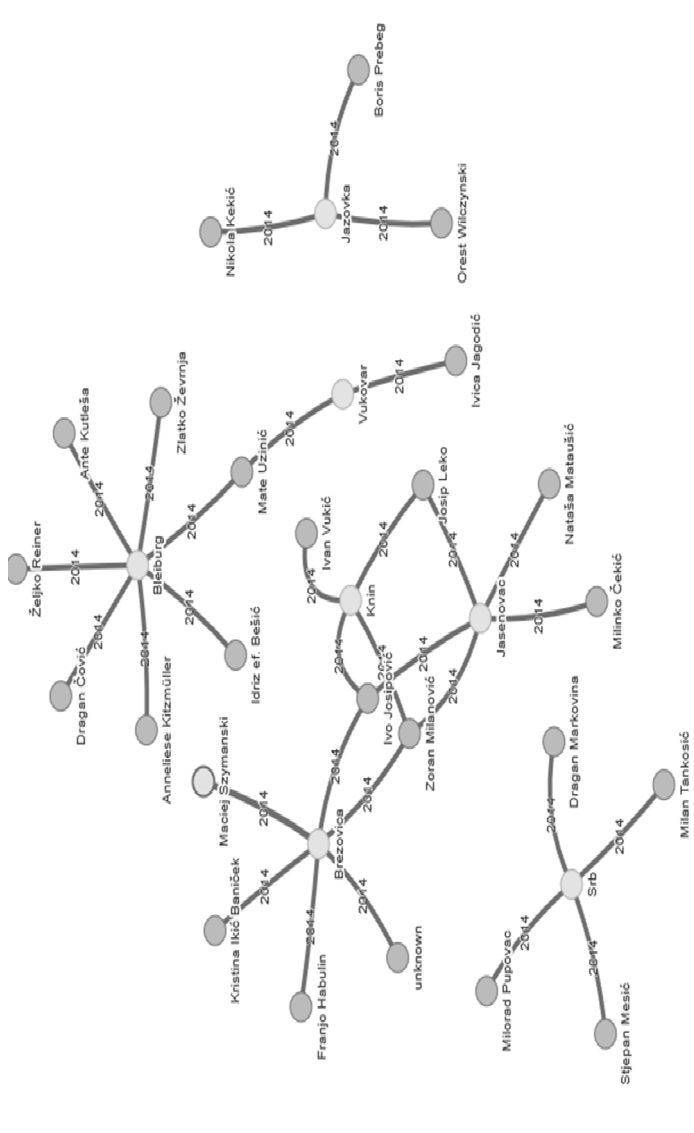
Figure 5-2. Network representation of the speakers' attendance at commemorations
during the year 2014
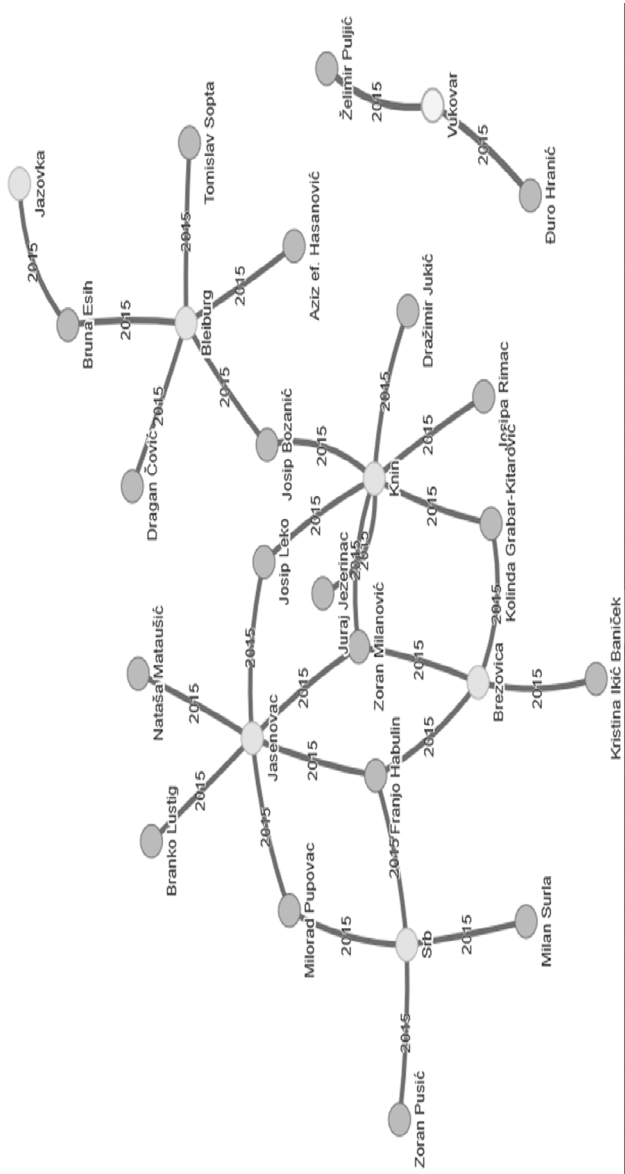
Figure 5-3. Network representation of the speakers' attendance at commemorations during the year 2015
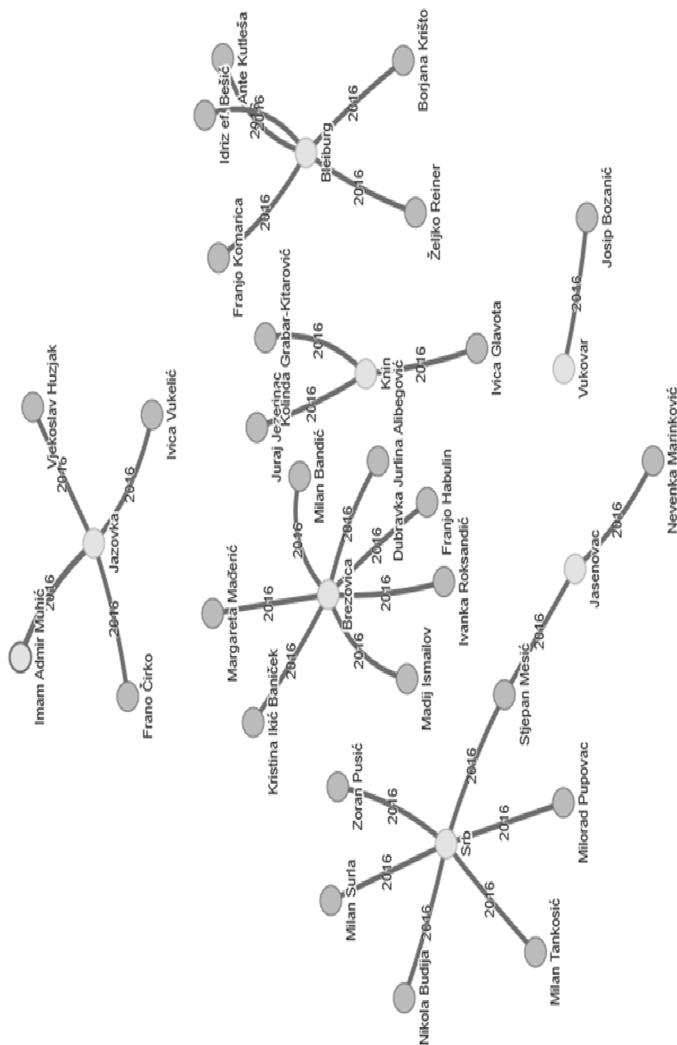
Figure 5-4. Network representation of the speakers' attendance at commemorations during the year 2016

Audio-visual material

The primary method of data gathering was related to fieldwork observation and audio-visual recordings of the commemorations. Every speech and its related commemoration ritual has been audio-visually recorded by researchers of the FRAMNAT project. The recordings were edited and stored on a local hard drive, as well as being published on the FRAMNAT Youtube channel.[4]
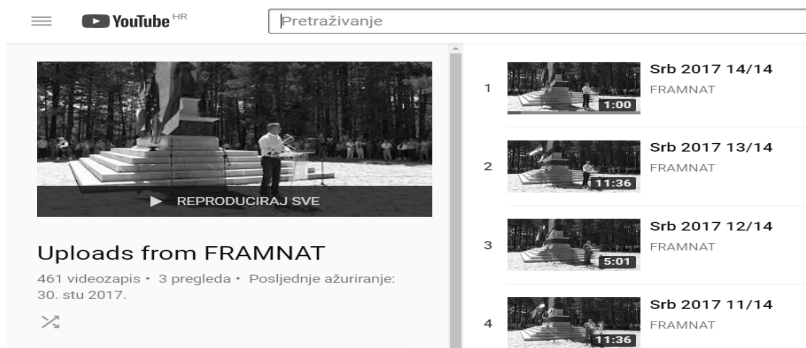
Figure 5-5. Screenshot of the FRAMNAT YouTube channel

The audio-video material allows for the multimodal research of commemoration speeches, and related rituals, such as wreath-laying ceremonies, clerical rituals, and processions. The published material is organized and tagged according to the year and the commemoration.

Transcriptions of the speeches and corpus creation

The audio-visual data was the basis for the transcription of the texts. The transcription has been performed by researchers and collaborators on the FRAMNAT project: Iva Davorija, Renato Stanković and Mirna Gurdon. In order to allow for consistent text analysis, the texts have been stored as .txt files along with their unique metadata filename: the name of the speaker, date of the speech, and the name of the commemoration. For instance, the speech delivered by Bozanić, in Knin, in the year 2014, is stored as "bozanic_kn_2014.txt". The texts of this FRAMNAT corpus are stored

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[4] *FRAMNAT Youtube channel*, accessed April 22, 2018, https://www.youtube.com/channel/UCjarsad6jWsKPi4Z7CdK5Wg.

locally in the Neo4j property database and published on the SketchEngine cloud service[5].

FramNat corpus on SketchEngine

The SketchEngine service is used for the text storage, tokenization of text, morphosyntactic tagging, lemmatization, and parsing of the texts, using the IHJJ sketch grammar for Croatian.[6] The FRAMNAT corpus is published on the SketchEngine service at the following address: https://the.sketchengine.co.uk/auth/corpus/140810/search.

Tagged FramNat corpus stored in a Neo4j graph database

A locally stored FramNat Corpus for additional ontological analysis of the texts is created using a custom-developed software application for storing linguistically tokenized, lemmatized, and syntactically parsed, digital texts of the Croatian language, using the Reldi application service,[7] py2neo Python library,[8] and graph property database Neo4j.[9] The application uses a pipeline of several automated processes that comprise: 1) ingesting the texts as data, 2) tokenizing, lemmatizing, and parsing the texts, and 3) storing multiple texts and tokenized, lemmatized, and parsed, morphosyntactic information, in the graph database. The application pipeline is presented in Figure 5-6.

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[5] *The SketchEngine cloud service*, accessed April 22 2018,
https://the.sketchengine.co.uk.
[6] The IHJJ sketch grammar for Croatian:
https://the.sketchengine.co.uk/auth/sketch_grammar/356/view/.
[7] The Croatian language using Reldi application service, accessed April 22, 2018,
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[9] Graph property database Neo4j, accessed April 22 2018, https://neo4j.com/.
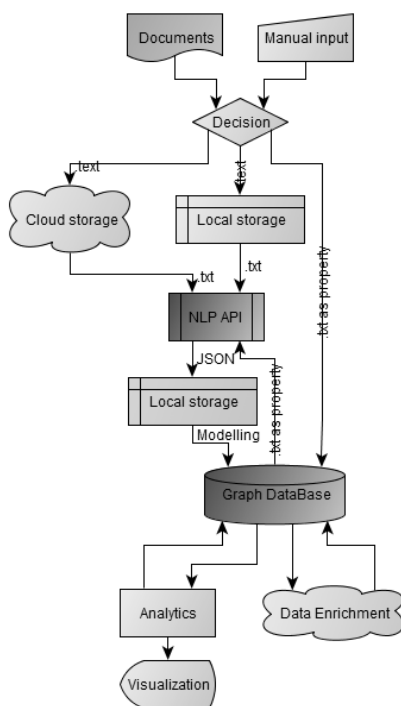
Figure 5-6. The pipeline for creating tokenized, lemmatized, and syntactically parsed, corpus, using the Reldi Api, Neo4j graph database and Py2Neo application

In the first phase, texts are processed in the form of .txt raw data and sent to the Reldi application programming interface (https://github.com/clarinsi/reldi-lib-doc). In the second step, the Reldi service parses the text data and sends back the lexical, morphosyntactic, and syntactic, values about tokens, lemmas, and dependency structures, in the form of a JSON data file. Next, the Python py2neo application converts the JSON data values stored on a local drive to a Neo4j database, using a custom-made linguistic schema model. The model extracts the JSON key: value structure to represent each text as an entity with the properties, such as the name of the text, creation date, link to the resource, etc. The schema of the model stores the linguistic structures of tokens, words, and lemmas, as entities, while the grammatical and syntactical relations are stored as connections between those entities. Each text is therefore decomposed into

corresponding tokens, words, and lemmas, according to the described linguistic schema (Figure 5-7).

Data integration

The data about audio-visual resources, texts, and metadata are published on the Google Sheet.[10]

This datasheet represents the structure of the information for each commemoration speech, including the name of the commemoration, description, available information about the commemoration on Wikipedia, available information about the historical reference on the commemoration topic, place of the commemoration, GPS coordinates of the commemoration site, year of the commemoration, speaker name, speaker party affiliation, Wikipedia resources on the speaker, additional resources on the speaker from media, picture, gender, function, affiliated institution, institution information, text name, text, estimated number of attendees, video link, and order of speech, in the commemoration event. The various data points are integrated using an ontological model that embeds the commemoration metadata, and textual and morphosyntactic data, with the resources for media research on the social context. The enriched information is stored in the graph property database Neo4j, and connected via the ontological model shown in Figure 5-7. The graph type of database is used to represent connected data. The graph representation of the commemorations communicates the structure of connectedness between data points at different phenomenological levels, and enables the quantitative and qualitative exploration of the correlational structure and their construals.

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[10] *Google Sheet*, accessed April 22 2018,
https://docs.google.com/spreadsheets/d/1rXV9x9-Jdpw84nmcOTEJBHnd-S5nu7-YDYk8zj06sN8/edit?usp=sharing.

Figure 5-7. Ontological model and Database Schema of Commemorative Speech
Analysis

The nodes represent the structurally different categories of entities, and their directional relations to component categories. For instance, a text has sentences, and syntactic constructions are part of sentences. Word forms are part of lemmas, while lemmas are part of texts. Furthermore, each node and its relations have properties that are expressed in the key: value format. For instance, the Person category has properties name and gender. Person is connected with the category Commemoration, with a relation ATTEND that has properties: name, place, date, geolocation, picture, and video. The ontologically different levels of the digital phenomena of commemorations are stored in a single database that enables complex queries within a certain category or between categories. The directed graph property structure supports the complex analysis of the social identity of actors, their interactions and institutional affiliations, and the cultural models they express in their speeches.

Analysis of the data

The analytic system comprises of queries that are formulated using the Cypher native programming language for Neo4j database[11] and Py2Neo Python library. The results can be represented as tabular sets of data, or in a network. The basic use of the analytic tools is related to various types of summarization and statistics. For instance, the thirty most frequent lemmas (basic word forms) or entity concepts, in the FramNat corpora 2014-2016 can be identified with the following query:

```
MATCH p=(t:Texts)-[r:HAS_lemma]->(l:Lemmas)
WHERE l.lempos ENDS WITH "-n"
WITH l.lempos as Lemma,r.lemmaCountInFile as count
RETURN lema, sum(count) as Sum
ORDER BY Sum DESC
LIMIT 30
```

The output of this query is represented in the Table 5-1.

---

[11] *Cypher programming language*, accessed April 22 2018, https://www.opencypher.org/.

Table 5-1. Thirty most frequent noun lexical concepts in the FRAMNAT 2014-2016 corpus

Lemma (lexical concept)	Translation	Sum
Hrvatska	Croatia	486
narod	People	323
godina	Year	322
čovjek	Man	308
žrtva	Victim	269
dan	Day	226
rat	War	219
život	Life	195
država	State	188
istina	Truth	182
mjesto	Place	174
zločin	Crime	157
sloboda	Freedom	154
borba	Struggle	150
domovina	Homeland	144
branitelj	Defender	137
put	Path	135
zlo	Evil	122
grad	City	121
povijest	History	121
mir	Peace	102
zemlja	Land	100
republika	Republic	99
ime	Name	97
Hrvat	Croat	97
riječ	Word	95
kraj	End	93
Vukovar	Vukovar	90
vrijeme	Time	89
fašizam	Fascism	87

Furthermore, if we want to extract similarities between two speakers on the level of the conceptual use, we can formulate a query that looks for the overlapping lexical concepts (lemmas). The following Cypher query displays these differences between texts produced by Ivica Glavota and Dražimir Jukić:

```
MATCH p=(s1:Speakers{name:"Zoran Milanović"})-
[d1:DELIVERED_SPEECH]->(t1:Texts)-[l1:HAS_lemma]-
```

```
>(lema:Lemmas)<-[l2:HAS_lemma]-(t2:Texts)<-
[d2:DELIVERED_SPEECH]-(s2:Speakers{name:"Želimir Puljić"})
WHERE lema.lempos ENDS WITH "-n"
WITH distinct(lema.lempos) AS lemm
RETURN lemm
```

The query returns following nouns: *mjesto* 'place'; *naš* 'our'; *budućnost* 'future'; *branitelj* 'defender'; *izraz* 'expression'; *vjera* 'faith'; *zajedništvo* 'community'; *dijete* 'child'; *dobro* 'good'; *osjećaj* 'feeling'; *vlast* 'government'; *oko* 'eye'; *srce* 'heart'; *republika* 'republic'; *Hrvatska* 'Croatia'; *predsjednik* 'president'; *rat* 'war'; *gospodin* 'mr.'; *dan* 'day'; *sloboda* 'freedom'; *poštovanje* 'respect'; *čovjek* 'man'; *godina* 'year'; *vojska* 'army'; *Europa* 'Europe'; *svijet* 'world'; *građanin* 'citizen'; *zemlja* 'land'; *dio* 'part'; *obitelj* 'family'; *mir* 'peace'; *život* 'life'; *država* 'state'; *ime* 'name'; *ponos* 'pride'; *put* 'path'; *prostor* 'space'; *otpor* 'resistance'; *strana* 'side'; *kraj* 'end'; *prijatelj* 'friend'; *događaj* 'event'; *Hrvat* 'Croat'; *vrijeme* 'time'; *tisuća* 'thousand'; *želja* 'wish'; *narod* 'people'; *mjesec* 'moon'; *čelo* 'forehead'; *trenutak* 'moment'; *sila* 'force'; *kultura* 'culture'; *početak* 'start'; *ruka* 'hand'; *riječ* 'word'; *sestra* 'sister'; *zajednica* 'community'; *poziv* 'call'; *pad* 'fall'; *način* 'means'; *svećenik* 'priest'; *dom* 'home'; *temelj* 'ground'; *čast* 'honour'; *sredstvo* 'means'; *Radić* 'Radić'; *pozdrav* 'salute'; *inozemstvo* 'foreign country'; *tijelo* 'body'; *rodbina* 'family'.

Due to the similarity between lexical concepts expressed by all speakers, we can calculate the proximity of different speakers and represent it by means of the speaker community graph. This community identification method can be used for discerning the cultural model of conceptualization related to a particular Speaker (Figure 5-8).
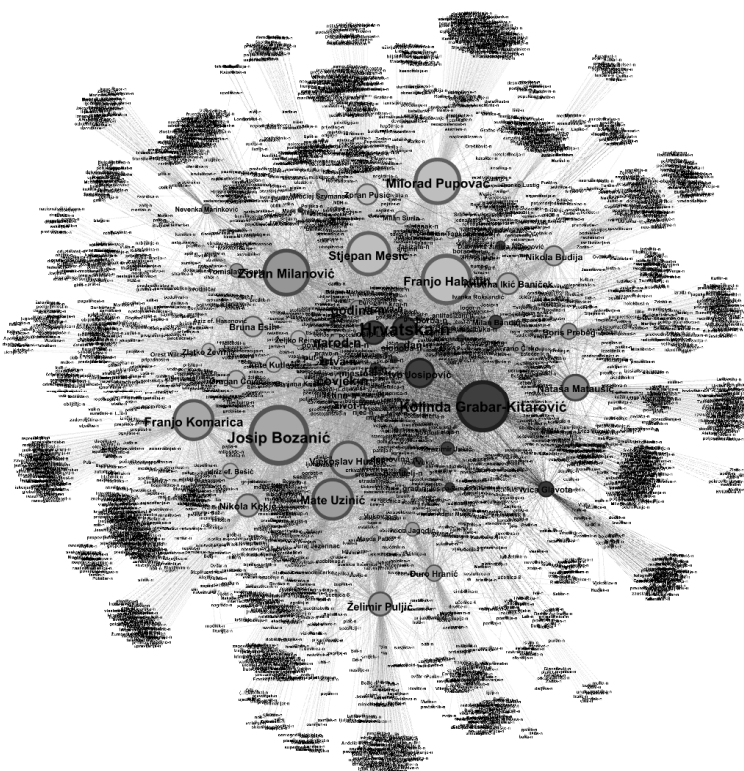
Figure 5-8. The graph of relationships between the 3,370 noun lemmas expressed by the 64 speakers. The size of the labels corresponds to the overall frequency of the nouns connected with the speaker

The Louvain algorithm for detecting communities[12] was applied to the network represented in Figure 5-8, and distinguishes ten communities of speakers. The communities, clustered according to the similarity of the nouns they used in their speeches, are shown in Table 5-2.

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[12] Vincent D. Blondel, Jean-Loup Guillaume, Renaud Lambiotte, Etienne Lefebvre, „Fast unfolding of communities in large networks," *Journal of Statistical Mechanics: Theory and Experiment*, 10, (2008): 1000, accessed April 22 2018, https://www.researchgate.net/publication/1913681_Fast_Unfolding_of_Communiti es_in_Large_Networks.

Table 5-2. Ten communities of the speakers clustered according to the similarity of the nouns used in their speeches

Community	Speakers	% of the network activation
1	Josip Bozanić, Franjo Komarica, Vjekoslav Huzjak, Nikola Kekić, Juraj Jezerinac, student 6, student 5, student 7, student 9, student 4	17.6 %
2	Franjo Habulin, Milorad Pupovac, Stjepan Mesić, Zoran Pusić, Milan Surla, Milan Tankosić, Ivanka Roksandić, Dragan Markovina	18.9 %
3	Mate Uzinić, Želimir Puljić, Đuro Hranić, Ivica Jagodić, Manda Patko, student 3, student 1, student 2	12.6 %
4	Bruna Esih, Dragan Čović, Ante Kutleša, Željko Reiner, Idriz ef. Bešić, ZlatkoŽevrnja, Borjana Krišto, Aziz ef. Hasanović, Orest Wilczynski, student 8	11,7 %
5	Kolinda Grabar-Kitarović, Ivo Josipović, Josip Leko, Milan Bandić, Dražimir Jukić, Ivan Vukić, Dubravka Jurlina Alibegović, Margareta Mađerić, Madij Ismailov	11,3 %
6	Kristina Ikić Baniček, Nikola Budija	5, 1 %
7	Zoran Milanović, Tomislav Sopta, Maciej Szymanski, Branko Lustig	8,2 %
8	Boris Prebeg, Frano Čirko	3,7 %
9	Ivica Glavota, Josipa Rimac	3,4 %
10	Nataša Mataušić, Nevenka Marinković, Imam Admir Muhić, Ivica Vukelić	7,5 %

Lastly, we can perform similar types of queries by connecting the speaker entities with the affiliated institutions. In this way we get the representation of the influence of the institutions in the overall corpus (Figure 5-9).

Figure 5-9. The graph of the relationships between the 3,370 noun lemmas expressed by the representatives of 31 Institutions

The size of the labels and nodes corresponds to the overall frequency of the nouns connected with a particular institution. The graph is projected in three ordinates: x, y and z. The projected z ordinate, perceived as the height of the institution nodes, corresponds to the number of different words connected in the graph.

The graph representation can be interactively explored at the FRAMNAT web site. It is important to note the connectedness and the structure between the institutions and concepts, represented by the Force Layout with z ordinate in Figure 5-9. The nouns commonly used by many representatives of the institutions are located in the oval centre of the graph, due to the many connections with different representatives, while the nouns specific and unique to a certain institution extend to the margins.

The data integration allows for the refinement of the various dimensions of the exploration within the structure of the dataset. For instance, the previous graph (Figure 5-9) states that the Catholic Church produced most of the concepts in the dataset. By using the graph structure we can query where these speeches were performed (Figure 5-10).
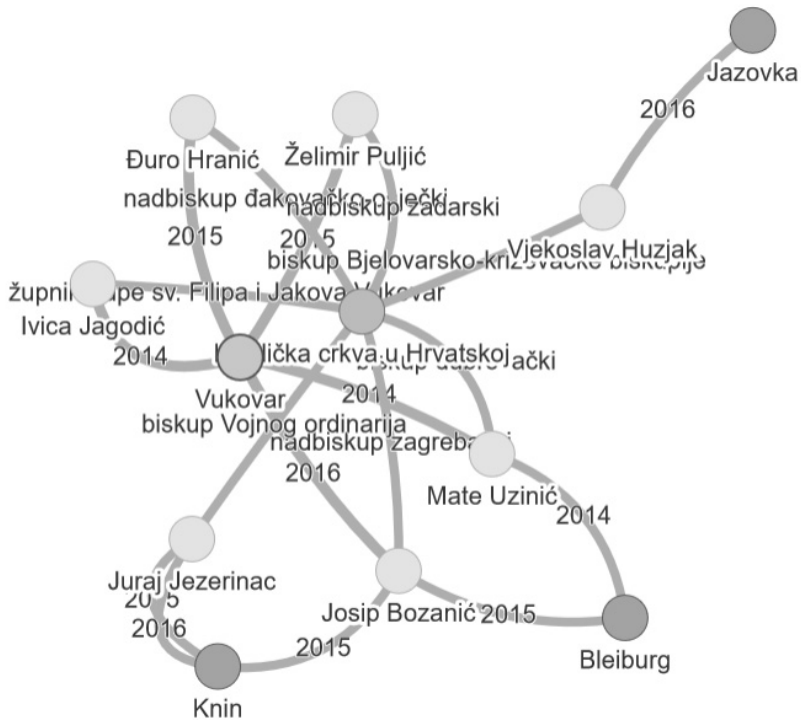
Figure 5-10. Network representation of the speaker's attendance affiliated with the Catholic Church in Croatia

The insight of these two graphs is that the institution of the Catholic Church was active in the Jazovka and Bleiburg commemorations of the Second World War atrocities, as well as in the Vukovar and Knin commemorations of the Croatian War of Independence.

Another type of conceptual analysis is related to the construal of the relevant entities. For instance, the 'dobj' type of syntactic-semantic construction reveals what the object of some process is. So, we can

formulate a query that reveals what the conceptualization of some entities is, when construed as a direct object. In other words, we ask, what you can do with some entity? Here is the query for the noun *domovina* or 'homeland' construed as a direct object:

```
MATCH (a:Lemmas{lempos:"domovina-n"})-
[r:HAS_dependency{function:"dobj"}]-(b:Lemmas)
WHERE b.lempos ENDS WITH "-v"
WITH max(r.countDep) AS freq, a.lempos AS directObject, b.lempos AS
process, r
RETURN process, directObject, r.function AS dependencyType, freq
ORDER BY freq DESC
```

The result of the query is represented in Table 5-3.

Table 5-3. The processes that conceptualize the noun *domovina* or 'homeland' as a direct object

Process	directObject	dependencyType	Freq
imati "have"	domovina "homeland"	dobj	4
voljeti "love"	domovina "homeland"	dobj	3
obilježiti "mark"	domovina "homeland"	dobj	1
štititi "protect"	domovina "homeland"	dobj	1
uzeti "take"	domovina "homeland"	dobj	1
voditi "lead"	domovina "homeland"	dobj	1
graditi "build"	domovina "homeland"	dobj	1
biti "be"	domovina "homeland"	dobj	1
poštovati "respect"	domovina "homeland"	dobj	1

The problem of construal of the abstract social concept HOMELAND is related to the metonymic and metaphoric conceptual analysis of the cognitive

processes.[13] In this case, the underlying metaphorical mappings are produced with the construal of HOMELAND as AN OBJECT THAT SOCIAL AGENT POSSESSES; A THING THAT PSYCHOLOGICAL AGENT LOVES; A VALUABLE GOOD TO BE PROTECTED|RESPECTED, AN OBJECT THAT CAN BE TAKEN, AN OBJECT THAT CAN BE LED, A THING THAT CAN BE BUILT.

Conclusion

This chapter deals with the analysis of commemoration practices from the perspective of the digitization and data integration of various phenomenological levels of analysis. The main goal of this interdisciplinary research is to understand the process of construing the culturally distributed cognition and conceptualizations, by means of public communication acts and speeches. We have identified the speakers as the social agents in promoting immediate conceptual and gradual cultural dissemination. The content of their messages is framed by the salient concepts from a cultural model, or worldview, that speakers share by institutional affiliation. The message is analysed as text consisting of tokens, words, and lemmas, applying NLP methods to the Croatian language. The value of this multilevel ontological model is in fostering an interdisciplinary approach through contextualization of data and targeted usage of digital resources. The contextualization of the data enables holistic insight into the dynamics of cultural memory practices, and their political implications for contemporary culture. The usage of digital methods allows for a fine-grained quantitative analysis that, due to the graph property organization of the model, continues to be qualitatively expressive, flexible, and non-reductive.

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TOPIC III:

DIGITIZATION OF CULTURAL HERITAGE

CHAPTER 6

VISIBILITY THROUGH ACCESSIBILITY: PETER HANDKE AS A CASE STUDY FOR DIGITIZING COPYRIGHTED CULTURAL HERITAGE

VANESSA HANNESSCHLÄGER

Abstract

This chapter presents three research projects that focus on the Austrian writer Peter Handke (born 1942) and discusses the problems and limits that arise from the fact that the subject of research is still alive, and thus his works are protected by copyright. The most extensive project to be discussed is the research platform Handke*online* which describes all work material created by Handke. A much smaller project which investigates the text genesis process of a single work by Peter Handke is the *Handke-app*. The third example is the database *Handke: in Zungen*, which collects foreign language text parts in Handke's stage texts. After a general introduction to copyright in an international, European, and national, context (by example of Austrian and Croatian law), the possibilities and limitations of data creation and publication in all three projects are discussed. The chapter concludes with general recommendations on handling copyrighted material in research projects.

Keywords: Peter Handke, legal issues, copyright, databases, manuscripts

Introduction: copyright and cultural heritage

Despite the fact that the first copyright acts were written "for the Encouragement of Learning"[1] or "to promote the progress of Science",[2] the digital humanities and digital cultural heritage research community mostly regards today's copyright law as a foe, rather than as a friend. In the digital world (where every use of a digital work necessitates its reproduction), copyright has evolved into a framework regulating access and re-use of all sorts of contents. This evolution did not spare the research community, whose activities were, even until quite recently, regarded as *de minimis* from the point of view of copyright.

Largely based at universities, cultural heritage institutions, or other public research institutions, humanities research is usually non-commercial, and based on a public mandate for education. Open (and free) access to sources, and the results of this research, gain further importance because most national funding agencies demand open access to research publications and data as a requirement for funding scholarly work. On the other hand, researchers themselves have a keen interest in defending their own intellectual property rights, in part due to economic concerns, but also in terms of academic credit. This conflict of interest, or 'Janus-face' of the researcher, is summarized in the *Universal Declaration on Human Rights*, which sets the premise that "(everyone has) the right freely [...] to share in scientific advancement and its benefits",[3] but goes on to say that "everyone has the right to protection of the moral and material interests resulting from any scientific, literary, or artistic production of which he [sic] is the author."[4]

For (digital) humanities scholars, this axiomatic situation, combined with recently developing trends towards open licensing, has created an urgent necessity to educate themselves on legal issues and discuss how copyright legislations impact and shape what we (are able to) do; "[t]he rapid worldwide expansion of digital humanities work demands that we

[1] *The Statute of Anne*, 1710, accessed April 25 2018,
https://www.copyrighthistory.com/anne.html
[2] *Constitution of the United States*, Article I, Section 8, Clause 8 (copyright clause), accessed April 2 2019, http://constitutionus.com/
[3] *Universal Declaration on Human Rights*, Article 27, Section 1, accessed April 25 2018, https://www.un.org/en/universal-declaration-human-rights/
[4] *Universal Declaration on Human Rights*, Article 27, Section 2, accessed April 25 2018. This thought was developed by Vanessa Hannesschläger, Pawel Kamocki, and Walter Scholger, "Rechtsfragen in DH-Projekten: Alles, was man wissen muss," *Zenodo*, accessed April 25 2018, http://doi.org/10.5281/zenodo.1186813.

begin to deal with the complex tangle of rights around digital humanities knowledge production before others do it for us."[5] One of the most important reasons for the necessity to deal with copyright issues, from the scholars' perspective, is that copyright laws are the framework within which we have to negotiate our research ethics, especially with regards to questions of the possibility of access to our work for all.[6] For this reason, this paper is offering an overview of the European copyright landscape from the point of view of researchers and professionals working with (the digitization of) cultural heritage.

This paper will present three research projects and approaches that focus on the Austrian writer Peter Handke (born 1942) and discuss the problems with, and limits to, these projects, which arise from the fact that the subject of research is still alive, and thus his works are protected by copyright. The method applied in this paper is an initial investigation of the European legal landscape, and a subsequent analysis of the legal conditions under which three concrete example projects were carried out. In a first step, the principal aims and goals of copyright legislations and their effect on (digital) scholarship will be introduced, and specifics of international copyright treaties and national copyright legislations (with a special focus on Croatian and Austrian copyright law) will be outlined. Subsequently, three sample projects and their individual challenges and problems with regard to copyright, will be discussed, before concluding with lessons learned from these examples and a 'legal checklist' for digital projects involving cultural heritage. Due to the subject of the sample projects, this paper's main focus is on the legal aspects of cultural heritage material which carries written text; an investigation of projects that focus on visual arts might put a stronger focus on other aspects of copyright than those discussed here, and come to slightly different conclusions.

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[5] Vika Zafrin et al., "Copyright, Digital Humanities, and Global Geographies of Knowledge," *Digital Humanities 2017: Conference Abstracts* (Montreal: McGill University, 2017), accessed April 25 2018,
https://dh2017.adho.org/abstracts/278/278.pdf.
[6] K. Faull et al., "Access, Ownership, Protection: The Ethics of Digital Scholarship," *Digital Humanities 2016: Conference Abstracts* (Kraków: Jagiellonian University & Pedagogical University, 2016), 66-68, accessed April 25 2018,
http://dh2016.adho.org/abstracts/6.

Copyright: national legislation in an international context

The concept of copyright has developed in manifold ways in different areas of the world for historical reasons.[7] Awareness of copyright legislations on a national and international scale is especially important for the digital humanities and digital cultural heritage community, because the transcending of national borders is inherent to the nature of digital research.

In most countries across the globe - nowadays also in the United States, though this was not always the case - authors don't need to apply for copyright protection because it 'follows the author's pen across the page'."[8] This might sound reasonable in principle, especially for creative and cultural works. However, it has been argued that "copyright is an unsuitable legal structure for scientific works [because] scientific norms guide scientists to reproduce and build on others' research, and default copyright law, by its very purpose, runs counter to these goals."[9] While this is an intriguing thought, the *de facto* situation of copyright legislations still requires us to consider them when developing our research, both in a national context and from a global perspective.

However, copyright legislations, by nature, stop at national borders. Thus, without international agreements and treaties, copyright law would not protect authors' rights even in a neighbouring country. Therefore, copyright has not just become a topic of international dimension since the invention of the internet, but is in fact a legal concept that has been discussed on an international scale since the 19th century. The Berne Convention[10] was the first international copyright treaty and was first signed in 1886. Its latest revision happened in 1971. It has since been the reference point of all newer international copyright treaties, the most important of which (in the

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[7] Alina Ng, "Literary Property and Copyright," *Northwestern Journal of Technology and Intellectual Property*,10,7 (2012): 531-577, accessed April 25 2018, http://scholarlycommons.law.northwestern.edu/njtip/voliss7/4.

[8] Victoria Stodden, "The legal framework for reproducible scientific research: Licensing and copyright," in: *IEEE Computing in Science and Engineering*, 11,1 (2009): 36, accessed April 25 2018, https://web.stanford.edu/~vcs/papers/Legal-STODDEN2009.pdf. Stodden here quotes Eric von Hippel, *Democratizing Innovation* (Cambridge; London: MIT Press, 2005), accessed April 25 2018, http://bibliotecadigital.org:8080/bitstream/001/183/7/0-262-00274-4.pdf.

[9] Stodden, "Licensing and copyright," 35.

[10] World Intellectual Property Organisation (WIPO), *Berne Convention for the Protection of Literary and Artistic Works*, accessed April 25 2018, http://www.wipo.int/treaties/en/ip/berne/.

context of digital scholarly work) is the 1996 WCT,[11] the Copyright Treaty by the World Intellectual Property Organization (WIPO). This treaty settles copyright questions for digital content, and notes the protection of collections of (digital) data (i.e., databases).

While these international agreements can smooth the contrariety between national legislations to some extent, it is still vital to know and understand the different concepts of, and possibilities offered by, copyright in the diverse legal traditions across the world. One US-American example discussed by Darling is the possibility of granting rights to unknown users, a topic of interest in the context of open licensing:

> [c]onsistent with notions of freedom of contract, United States copyright law allows authors to grant publishers the rights to all known or unknown uses of a work. Despite the ostensible clarity of this norm, courts have struggled considerably with cases where the scope of rights transferred is uncertain. New media developments have generally prompted litigation and the issue of which exclusive rights can and should be implicitly licensed has never been resolved with consistency. [...] Looking across borders, it is apparent that other countries have been dealing with similar issues within their copyright systems. Many countries, however, have chosen a different approach to the problem.[12]

This diagnosis is true for many aspects of copyright legislation.

The problem of different approaches to intellectual property is not only true on a global scale, but can even be an issue within a relatively harmonized area such as the EU, a fact that makes fostering exchange between scholars coming from different national situations vital, as this will allow us to better understand the situation we are dealing with in the borderless land that is the internet. In a European context, employment of the term 'copyright' itself is already problematic, as it refers to a concept of the Anglo-Saxon legal tradition: *copy*right primarily aims at regulating the right to replicate and reproduce. However, in most European countries the Germanic legal tradition, which puts a stronger focus on the persona of the creator ("Urheberrecht", "droit d'auteur") has shaped copyright legislations. Within (most of) Europe, it is therefore more accurate to speak of

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[11] World Intellectual Property Organisation (WIPO), *WIPO Copyright Treaty (WCT)*, accessed April 25 2018, http://www.wipo.int/treaties/en/ip/wct/.

[12] Kate Darling, "Contracting About the Future: Copyright and New Media," *Northwestern Journal of Technology and Intellectual Property* 10,7 (2012): 485-530, 486f, accessed April 25 2018,

http://scholarlycommons.law.northwestern.edu/njtip/vol10/iss7/3

'intellectual property' (IP), rather than 'copyright' law. However, as Kamocki et al. have pointed out:

> As IP law in the European Union is merely harmonized and not unified, the exact scope of copyright and similar rights may differ between member states (e.g. some member states recognize an exclusive right for 'scientific and critical editions', while others don't).[13]

Therefore, this paper aims at raising awareness of this fact, addressing the most crucial differences between national legislations, by example of Croatia and Austria.

A note on this paper's terminology: The term 'copyright' is used as a general term, in a broad sense, to describe an author's rights to his, or her, works, i.e., moral as well as exploitation rights. The latter can be sold or transferred (which is usually the case in some form when an author signs a contract with a publisher), while the former is inalienable in most European legal traditions. These rights concern the works on an abstract level, i.e., as 'ideas'. When discussing the juridical situation of archival material, yet another legal concept is vital: the concept of ownership for the physical carriers of the texts (which is not *per se* linked in any way to the rights to the abstract work).

Copyright: Croatia and Austria–national perspectives

Austrian copyright law is defined in the *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte (Urheberrechtsgesetz)*.[14] It protects all material and immaterial rights of a single creator (or a group of persons who have collectively created a work) to their works. It covers works of literature (which also includes programming code and scientific texts), works of visual, sound and film art, as well as adaptations (such as translations or

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[13] Paweł Kamocki, Pavel Straňák, and Michal Sedlák, "The Public License Selector: Making Open Licensing Easier," in: *Proceedings of the Tenth International Conference on Language Resources and Evaluation (LREC 2016)*, Portorož, Slovenia, ed. by Nicoletta Calzolari, et al., 2534 (Paris: European Language Resources Association (ELRA), 2016), accessed April 25 2018, http://www.lrec-conf.org/proceedings/lrec2016/pdf/880_Paper.pdf.

[14] See *Bundesgesetz über das Urheberrecht an Werken der Literatur und der Kunst und über verwandte Schutzrechte 2017 (Urheberrechtsgesetz)*. StF: BGBl. Nr. 111/1936 (StR: 39/Gu. BT: 64/Ge S. 19.), accessed April 25 2018, https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=10001848.

editions), and collections (including databases and database works). Whether a work has been published or not does not influence the emergence of copyright, but it might change the situation for scholars aiming to work with the material (see following chapters). After the creator's death, copyright is inherited by designated or natural heirs (a designated heir can be a natural or a legal person, i.e., an archive can become a creator's heir if the creator's Will appoints the archive as his/her heir) and expires 70 years after the death of the creator. In order for a creation to qualify as a 'work', the criterion of 'originality' has to be met, which requires the work to be a 'unique intellectual creation'.

In Austria, creators (and respectively their heirs) own the exclusive right to publish their works, as well as to make them available (disclose them) to members of the public in any form (e.g., digital). All exploitation rights (i.e., rights to distribution, dissemination, copying, renting, lending, reciting, performing, and provision of the work) can be sold or liquidated in a different form by creators or their heirs. Moral rights on the other hand (i.e., the right to *be* the creator of the work, and to *be attributed* as its creator on the one hand, and integrity right, which is the right to not have the work altered or distorted, on the other) are natural, i.e. factual rights, and can thus not be transferred to a different person. While the heir can execute the integrity right after the creator's death, the right to attribution on the other hand remains with the original creator (i.e., after Peter Handke's death, his children will not have the right to be named the authors of Handke's works).

For researchers working with literary texts or manuscripts of literary texts (but also with other kinds of copyrighted material) the outlined situation might make it necessary to collect usage rights not only from creators, and respectively their heirs, but also from publishing houses or other institutions that might have acquired certain exploitation rights. In this context, it is important to note that Austrian copyright legislation protects the work as an abstract concept, not its concrete material manifestation, which means that ownership rights to material witnesses of works do not necessarily have any prior connection to copyright issues. Consequently, an archive or a library, or any private person who owns manuscripts or other work material, created by an author or other type of creator, has all the rights to this material that come with ownership (which also includes destruction), but is not (or not *per se*) entitled to execute any moral or exploitation rights to the abstract work that is manifest in it. However, the respective material owner does possess the right to restrict or open use of the material (in the sense of physical interaction, i.e. reading of, or looking at, the material). The right to publish previously unpublished works always remains with the creator or his/her heirs; if previously unpublished material is legally

published by someone, e.g., in the form of an edition, that person gains copyright to that edition (which remains intact for 25 years after initial publishing).

Another important aspect of copyright is that it is the creator's (or his/her heirs') exclusive right to allow or deny exploitation of the work, e.g., reproduction and distribution by a publisher, performance by a singer, or actor/actress, and recording of a performance. If these rights are granted, new rights emerge which are called related rights (these again include both moral and exploitation rights) and which are owned by the parties involved in usage (the singer, the production company producing a performance record, the publishing house, etc.). The copyright for the original work remains with its creator.

Croatian copyright law, as regulated in the *Copyright and Related Rights Act* and the *Act on Amendments to the Copyright and Related Rights Act*,[15] is very similar to the Austrian copyright legislation described above; as in Austria, authors naturally gain copyright by the act of creation and cannot renounce their copyright. The most important copyright exception in the context of scholarship, which both the Austrian and Croatian copyright law explicitly state, is the right to quote from a copyrighted work without having to ask permission to do so. One interesting difference is the scope of Croatian copyright, which, in addition to the types of works referred to above, also covers architecture, applied arts, and industrial design. Generally, within the Romano-Germanic copyright tradition (which both Croatian and Austrian copyright laws are part of) the most interesting differences are to be found in the definition of intellectual areas to be protected; one example is that German copyright law applies to "literature, art and scientific works," while Austrian and Croatian copyright law both view scientific texts as a subcategory of literature. In addition, Croatian copyright law explicitly protects "presentations of a scientific or technical nature"[16] (i.e., graphs, charts), which are not explicitly mentioned in Austrian copyright law. Both see programming code as works of literature, and both protect databases, which are defined as 'collections', in two ways: on the one hand, the concept of data collection and structuring (the intellectual act of defining the 'form' of the database) of a database is

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[15] For the English version of the text, see *Copyright and Related Rights Act and Act on Amendments to the Copyright and Related Rights Act*. (OG No. 167/2003, 79/2007, 80/2011, 141/2013, 127/2014, 62/2017), accessed April 25 2018, http://www.dziv.hr/files/file/eng/zakon_autor_ENG.pdf.

[16] European Union Intellectual Property Office Observatory. *FAQs on Copyright (Croatian perspective)*, accessed April 25 2018, https://euipo.europa.eu/ohimportal/en/web/observatory/faqs-on-copyright-hr.

protected, on the other hand, the actual data collection is protected if collecting the data meant a 'substantial investment' of resources; this latter aspect is called *sui generis* database right.

The legal status of Peter Handke-related material

The Austrian writer Peter Handke (*1942) is a research subject, by example of which manifold copyright-related issues of digital humanities and digital cultural heritage projects can be illustrated. There are several reasons that make Handke a good subject, the most important of which is that the author is still alive, thus copyright is still active, and its owner can still execute his own rights. In addition, Handke studied law, therefore his awareness of copyright issues can be assumed. Secondly, while Handke is Austrian, he lives (and writes) in France, therefore his work is technically subject to French, not Austrian copyright legislation at the time of creation. In addition, his main publishing house (which also owns, for the most part exclusively, reproduction rights to his works) is Suhrkamp, a German publisher that is naturally bound by German copyright law; thus, Handke's writing is suitable to illustrate the diverse European copyright landscape. Thirdly, Handke produces large amounts of work material (manuscripts, photographs, notebooks, etc.) which have been preserved: the two biggest collections are located at the German Literary Archives in Marbach and the Literary Archives of the Austrian National Library in Vienna, within two different spheres of European copyright. Additionally, there is material at his home in France, and in several smaller public and private archives across Europe. This further complicates the copyright situation, which is why Handke is such a good example to discover a diverse range of potential pitfalls with regard to analogue and digitized cultural heritage and its relation to copyright legislation(s). All these aspects impacted the projects described below in different ways, which will be discussed individually.

Example 1: Handkeonline[17]

The first project to be discussed here is the platform Handke*online*, a project that was implemented by the project team (consisting of Katharina Pektor, Christoph Kepplinger-Prinz and Klaus Kastberger) at the Austrian National Library, from 2011 to 2015. It is the most extensive of the three projects demonstrated, as it describes all the work material created by Peter Handke in his 50 years (and ongoing) career as a writer. This material is scattered

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[17] *Handkeonline*, accessed April 25 2018, http://handkeonline.onb.ac.at/.

across numerous public and private archives; the two most important collections are owned by the German and the Austrian national literary archives. A substantial part of the collection in Austria is on loan from a private collector (an Austrian), however part of the collection also belongs to the archive itself. Further institutional owners of Handke material include the Salzburg literary archives, the Carinthian literary archives, and the Swiss literary archives at the Swiss national library. Additionally, individual items or smaller collections of material are owned by private individuals (friends and family members of the author).

The platform's core module presents Handke's 'works and materials' and aims to provide a complete overview of the material, thus listing each (known) individual archival item documenting the genesis of Handke's works (grouped by works). Each item is described with a table of metadata information, as well as a descriptive text, highlighting special features such as material qualities, and date and place of creation, but also descriptions of the content and relationship to other material (for example a collection of photographs that inspired the location of a play will be put in relation to the manuscripts and typescripts of the text stages of the play in which they were introduced). Almost every item described also includes example scans from the material (e.g. pages of a manuscript that have special material features, or which show how the text stage represented in the manuscript differs from the final, published text). These images open in a popup. They have a digital watermark and a caption which includes the title, material type, year, archive, signatory, and page number of the displayed image, as well as copyright information; in 99% of the cases, that is "© Peter Handke". The same is true for the material to be found in the module 'full facsimiles'. Thus, the moral rights of the author are respected; however, moral rights are usually not problematic in research projects containing digitized cultural heritage objects, as these projects are usually based on the significance of the creators of the material presented, thus their names are not omitted. However, the exploitation rights for the texts are, in this case, owned by the publishing house, therefore its consent had to be secured in order to be able to present the 'full facsimiles' containing the entire texts. Whether an early text stage that differs from the final published text in some aspects constitutes a new 'work' and therefore copyright protection that would be independent of the copyright protection of the published work, is an interesting legal discussion that does not have a definitive answer.

In addition to these rights, the start page of the website informs users that, "images and facsimiles are protected by copyright and reproduction

rights, any further distribution of this content is explicitly prohibited."[18] This note refers not only to the moral and exploitation rights to the original material mentioned before, but also to the Austrian National Library's ownership of its digital reproduction, i.e. the scans. The European copyright legislations also do not provide a clear answer to the question whether a scan (or a photograph of an artwork) can be an independent 'work' and thus be protected by copyright; however, ownership rights apply to digital objects such as scans in the same way that they apply to physical objects, therefore the scans are owned by the library and it is entitled to all decisions about the permission or prohibition of their use (as long as the other rights to that material are respected).

As the platform includes sample scans from almost every single manuscript, typescript, notebook, photo collection, or other type of material, copyright issues posed a major challenge for this project. With the author still alive, a notable publishing house involved, and various archives in different countries (with different national copyright legislations) preserving the material, the only solution enabling the digital presentation of the scanned material was to individually appeal to the goodwill of all parties involved, as no budget was available to pay for the permission to use the material. The wide success of this process was due to the personal relations of the project team members to the copyright stakeholders. This illustrates that copyright conformity is often not only a legal, but also (and even more so) a diplomatic, issue.

Similar to the author's copyright to the works presented, the descriptive texts provided by the platform are under the copyright of the editorial staff (respectively other contributing authors), and may be quoted, but not reused without attribution (which is a condition that is explicitly mentioned on the website, even though it is legally inherent to copyrighted text). The website does not state the legal conditions under which the collected metadata about the material may be used; in digital humanities contexts, the legal status of metadata collections is usually explained by an attributed (open) license (*Creative Commons*[19] licenses have become the *de facto* standard for licensing digital scholarly content). However, in this project, that is not the case. This is an unfortunate situation, as, without an attributed license, the (meta)data remain proprietary due to the *sui generis* database right (see above), which prohibits use of any data collection that required a 'substantial investment' in order to be created, unless the owner explicitly consents. Thus, the Austrian National Library, legal carrier of the project, is

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[18] See *Handkeonline*, accessed April 25 2018,
http://handkeonline.onb.ac.at/node/2594 (my translation).
[19] *Creative Commons*, accessed April 25 2018, https://creativecommons.org/.

legally able to prohibit any further analysis of the data or its enhancement by other researchers, and has to be asked for permission if subsequent projects would like to use the data presented on the platform.

The platform's concept was feasible because the author and other rights holders (material owners such as the institutional or private collectors, as well as exploitation rights owners such as the publishing houses) chose to be liberal about the amount of material shown on the website. In addition, Handke's publishing house, Suhrkamp, which holds some exploitation rights to his texts, was convinced by the project team and author to allow the digital depiction of a few texts in their entirety. The watermarks on the scans aim at preventing unauthorized printing in order to protect the copyright holder (Handke) as well as the material owners (in the majority of cases the literary archives of the Austrian National Library), however, this might be considered redundant, as the scans' quality is not suitable for printing. One technical aspect of the content management system used for building the platform created a copyright delusion: digital Austrian National Library watermarks were added to *all* example scans, even though substantial amounts of these scans were not created by this library, and the items depicted are not owned by this library.

Example 2: Handke-App[20]

A much smaller project, which aims at investigating the text genesis process of a single work by Peter Handke, is the Austrian Centre for Digital Humanities' *Handke-app* (which is a digital edition web application, not a smartphone app), which was created in 2016 by myself and my colleague Peter Andorfer. It contains the respective first pages of the more than ten text stages of Handke's stage text *Immer noch Sturm* (Storm Still), both as digital facsimiles of the text witnesses, and as transcriptions, as well as extensive metadata on the material text carriers and the text genesis process (writing dates, writing places, people involved, etc.). This app only contains the first pages, not the entire texts, because it was developed as a case study rather than in the framework of a project with proper funding, therefore resources were limited. The second major reason was, again, the copyright situation of the material edited.

The copyright (i.e., moral rights) to the material presented in this project, the first page of each manuscript or typescript of each of the eleven text stages, is owned by the author himself, therefore his consent to the publication had to be collected. The exploitation rights to the text presented

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[20] *Handke-app*, accessed April 25 2018, https://handke-app.acdh.oeaw.ac.at/.

are owned by the publisher Suhrkamp; however, in this project, the publisher's consent did not have to be obtained, as only a single page, not the entire text, is shown; this presentation of only a section of text qualifies as a 'quote', which Austrian, as well as German, copyright legislation lists as one of the 'copyright exceptions' that allow users to publish material without having to request permission. Even though the right to quote made obtaining the publisher's consent unnecessary, the author's consent still had to be secured, as the original manuscripts from which the individual pages were taken might qualify as works in their own right (i.e. independent from the published version of the text), which gives the author the exclusive right to decide if the work may be made available to the public or not. In addition, the ownership rights to the physical material belong partly to the Salzburg literary archive, and partly to a private collector who gave his material as a loan to that same archive. The archive and the collector did not only permit use of the material for the project, but the institution also provided the scans of the material and consented to their digital publication on the project website.

An interesting aspect of the *Handke-app* was the legal situation of the data processed for representing the text genesis process on a map and a timeline. These data included information on dates, places, and people involved in the genesis of each single text stage. Among the people involved were the author himself, in France, as well as a typist in Germany who prepared the typescripts that the author then manually edited, the publisher's editor in Germany, an additional editor in Austria who corrected the text passages written in a different language (Slovene), the private collector who owns part of the material in Austria, and the director of the play's debut performance in Austria. Some of these people left physical traces on the material (notes, corrections, etc.); in order not to have to collect their consent to publishing the material, we decided to regard their contributions as minor, and thus not copyrightable.

Still, for representing the process of text genesis, we needed to include information on their contributions in the form of data. Luckily, the data needed had already been collected by another project: the Handke*online* platform. As mentioned above, the law regards data as facts, and facts are not copyrightable; however, data*bases* are protected by the *sui generis* database right which protects any collection of data whose creation required a substantial (time or financial) investment. As the Handke*online* platform belongs to the Austrian National Library, the library's consent to the use of the data in question would therefore have to be collected (even though the data is not extractable from the platform in a structured manner, and therefore had to be 'recreated' manually on the basis of the information

found on the platform). However, as we did not use the entire Handke*online* database, but only the data on one single work, we were able to do so without collecting consent thanks to the copyright exception of quotation, which also applies to databases.

Example 3: Handke: in Zungen [Handke: in tongues][21]

The third example to be discussed is the data created in my dissertation project on foreign language text parts in Handke's stage texts. The relevant passages from Handke's texts were collected as quotes in a relational database called *Handke: in Zungen* (Handke: in tongues) which was published online by the Austrian Centre for Digital Humanities in 2017. As this database only includes quotes (i.e., transcriptions, not images) from published texts, archives and libraries are not relevant to the copyright situation of the material presented. Again, this project is possible thanks to the right to quote. As the law allows this copyright exception without the requirement to collect moral or exploitation rights holders' permission, the database was able to be published without any retardation by copyright clearance issues. In addition, as the creation of the database meant a substantial time investment, the data collection is protected itself; therefore, it was possible to apply an open *Creative Commons* license (CC-BY-SA 4.0) to the database, which will facilitate its reuse by future projects. This is a substantial improvement to the situation of the data created in the projects described above, as the editorial decision of the creators of Handke*online* not to license the data created in the project not only complicated reuse of these data in the *Handke-app*, but also hindered licensing the material created in this follow-up project.

Conclusion: how to handle copyrighted cultural heritage

In conclusion, the three projects discussed all heavily rely on the copyright exception of quotation rights, which enables the presentation of limited parts of texts without having to collect consent from the owners of moral and exploitation rights. However, in projects presenting unpublished material (such as early text stages, or other material created in the course of writing a new work), consent by the copyright holder had to be collected. In addition, the material owner of the physical text carriers had to allow their digital reproduction and subsequent publication. When texts are published

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[21] *Handke: in Zungen*, accessed April 25 2018,
https://handkeinzungen.acdh.oeaw.ac.at/.

in their entirety, the exploitation rights owner also has to consent. An additional important aspect of the projects was the copyright situation, not only of the content they processed, but also of the material they created. As scientific works are protected by copyright in the same way that creative and artistic works are, the failure to license the data created in the scientific projects can handicap future researchers who want to build on the work already done.

The lessons learned from the three projects described are summed up in the following legal checklist, which cultural heritage researchers working in digital space can employ to make sure their work is legal and sustainable.

The legal checklist for digital cultural heritage projects

1. Find out who is the copyright owner of the material you want to work with, and by which national law his or her work is protected.
2. If the material you want to work with has been published, find out if the exploitation rights to the material are owned by the moral rights owner, or by a different stakeholder (such as the publisher).
3. If the physical material you want to work with is not owned by the copyright holder, pay attention to ownership rights.
4. If the work you plan to carry out is not legally enabled by a copyright exception, collect consent from the moral rights owner and the exploitation rights owner.
5. If you wish to digitally reproduce material and publish the digital reproduction, collect consent from the moral rights owner, the exploitation rights owner, and the owner of the physical object.
6. If you wish to work with, or reuse, data created by other stakeholders (i.e. libraries, archives, other research projects), check the legal status of the data.
7. If the data is available under an open license, pay attention to the conditions under which the license allows reuse (Is it possible to alter and enhance the data? Are you required to share the work you do based on the data in the same manner that your source data was made available to you?).
8. If the data is not available under an open license, decide if you want to use the entire dataset or only parts of it. If you want to use the entire database, collect consent from the database owner.
9. Choose a license for the content you create and present. Make sure that the copyright situation of the material created by others that you are using allows you to apply the license you chose.

10. If you are unable to share the cultural heritage objects you are presenting under an open license, still license the content you created yourself to make life easier for the next research project that wishes to build on your work.

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CHAPTER 7

VISUAL ART RESOURCES AT DIGITAL COLLECTION OF THE CROATIAN ACADEMY OF SCIENCES AND ARTS: SUPPORTING DIGITAL ART HISTORY

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Abstract

The Digital Collection of the Croatian Academy of Sciences and Arts (CASA) is a unique institutional repository for digitized material of CASA's holdings. Today, sixteen Academy departments contribute to a joint portal with the main goal of presenting their scientific and artistic collections, offering free access with technical support of modern and standardized development. The collection is continuously expanding, comprising digitized material in the form of text, image, and audio/video. Several CASA institutions engaged in the visual arts contribute to the repository, thus creating digital collections of visual art images of traditional media, such as sculpture, painting, drawing, prints, photography, posters, and architectural drawings. The CASA Digital Collection's features, and its networking with other institutions, are the framework for creative development and content enhancement, metadata development, and heritage interpretation, which can serve as one of the starting points in supporting digital art history in Croatia.

Keywords: Croatian digital collections, visual art resources, virtual exhibition, digitized art history, digital art history

Introduction

This chapter deals with the role of digital technologies within the humanities, focusing on digital art history, and the role of visual arts within this fundamental discipline. Within this theoretical context, we present the history of CASA's institutional digital repository (Digitalna zbirka HAZU – DiZbi CASA)[1] and the variety of its visual material provided by several Academy units, further discussing the portal's specifics and functionality.

Although, for now, the visual content of CASA's digital collections is represented in a much lower percentage than textual content, this chapter highlights numerous possibilities of its use as part of *digitized art history*, but also as a powerful tool in further development of Croatian *digital art history*,[2] which will inevitably imply epistemological, theoretical, and interpretative forms of its future use.

Currently, digital humanities are established as a rather new academic field of research. The term has been widely used since 2004,[3] signifying major changes in humanities related to digitization, high speed data transfer, Big Data, and complex algorithms.

Digital humanities are theoretically defined by the authors of *Digital Humanities Manifesto 2.0*, determining the first two waves or layers of digital humanism as quantitative and qualitative.[4] According to the Manifesto, the first wave, in the late 1990s and early 2000s, was focusing on major digitalization projects and the establishment of technological infrastructure. The other wave is deeply generative, and creates the environment and tools for production, and interaction with knowledge, thus introducing new paradigms and convergent fields of hybrid methodology. This process leads to the third wave, which points to the ways in which digital technologies are referring to the anomalies generated in humanistic research projects, questioning the assumptions implicated in such research, the formation of canons, and the belief that computer tools can change the

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[1] *The Digital Collection of the Croatian Academy of Sciences and Arts*, accessed April 3 2018, http://dizbi.hazu.hr.
[2] Johanna Drucker, "Is There a Digital Art History?," *Visual Resources*, 29,1-2 (2013): 5-13, accessed April 3 2018, doi: 10.1080/01973762.2013.761106.
[3] Kathleen Fitzpatrick, "The Humanities, Done Digitally," *The Chronicle of Higher Education*, May 8 (2011), accessed April 19 2018,
https://www.chronicle.com/article/The-Humanities-Done-Digitally/127382.
[4] "Manifeste pour des humanités numériques 2.0," *Multitudes*, 59,2 (2015): 181-195, accessed April 3 2018, doi: 10.3917/mult.059.0181. (English version, http://www.humanitiesblast.com/manifesto/Manifesto_V2.pdf, accessed March 26 2018).

scope, methodology, and audience of humanistic research. In Croatia, *digital art history*, supported by *digitized art history*, is still in its articulation phase, but steadily becomes a new tool for interpretation and reinterpretation of various phenomena in Croatian art.[5]

The term *digitized art history* refers to the repositories, digital collections, and databases, which gather and process a growing number of digitized visual art materials, which includes images, texts, audio, video content, and consecutively, their metadata.

The domain of *digital art history* is related to analytical techniques enabled by information technology that create an interdisciplinary approach, and at the same time, provide scientific insights beyond the scope of the analytical apparatus of traditional art history. Digital art history serves as a research tool, revealing interrelationships, and providing scientific insights beyond known boundaries, which we would not perceive using traditional art historical methodologies. According to Rodriguez Ortega, this profound transformation of the discipline will result in a new epistemology.[6]

Interpretative art history, using various tools and methods, and the ability to manage digital information, is placed at the centre of current theoreticians of the field. Jaskot, for example, tries to find out what are the questions of art history that could be answered with the help of digital tools, and puts the focus on the intellectual potential of the intersection of new technologies and fundamental art history discipline.[7] There are also discussions about the challenges in which these new forms of knowledge serve educational and scientific purposes, assuming the necessary and close interdisciplinary collaboration of humanities and technological science.

In Croatia, over the past two decades, a series of digitization projects have been involved in a process of development of digitized art history, especially in museum practice. In the museological context, information technology and multimedia enable a diverse representational potential of information and the communication engagement of the end user.

In recent years, various Croatian digital platforms or repositories, containing visual art resources, are being developed, many of them financed as part of European projects. The Museum of Modern and Contemporary

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[5] Ljiljana Kolešnik, "Digital Art History: Features, Problems and Prospect," *Život umjetnosti*, 99 (2016): 8-17.

[6] Nuria Rodrigez Ortega, "Digital Art History: An Examination of Conscience," *Visual Recources*, 29,1-2 (2013): 130-131, accessed April 15, 2018, doi: 10.1080/01973762.2013.761124.

[7] Paul B. Jaskot, "Debates in the Digital Humanities, edited by Matthew K. Gold," *Visual Resources*, 29,1-2 (2013): 140, accessed April 15, 2018, doi: 10.1080/01973762.2013.761126.

Art in Rijeka was one of the first in Croatia to construct its own digital collection of museum items by joining the *Digitising Contemporary Art* project (DCA) in 2011.[8] In 2012, The Museum of Arts and Crafts in Zagreb joined the *Partage Plus* project of digitization of European Art Nouveau objects, artworks, posters, and buildings, to create more than 75,000 digitized items to be accessed by users of *Europeana*.[9] The Museum is also a partner in the *AthenaPlus* project,[10] and one of the partners in the European project A*RT NOUVEA–Sustainable protection and promotion of Art Nouveau heritage in the Danube Region*, which started in 2017.[11]

Several public and private galleries and museums also made part of their collections available online, such as The Museum of Contemporary Art in Zagreb,[12] the National and University Library in Zagreb,[13] Dr Josip Kovačić's Donation of the works of Croatian women painters born in the 19th century,[14] and the Marinko Sudac Collection.[15] All these, however, represent a very small amount of the visual material needed for forming the image corpus of digital art history research in Croatia.

Big image data

Over the last few years, the term *Big Image Data* (BID), representing a specific form of a large amount of visual content, has been introduced to the digital art history discussion. The definition we most often encounter covers the following concepts: high *volume*–a large amount of data collected, processed and made available for analysis, high *velocity*–continuous

[8] *Digitising Contemporary Art*, accessed April 16 2018,
http://www.digitisingcontemporaryart.eu; http://www.zbirka.mmsu.hr/.
[9] *Europeana*, accessed April 16 2018,
http://www.partage-plus.eu/en/contents/1,About+Partage+Plus;
http://partage.muo.hr/.
[10] *AthenaPlus*, accessed April 16 2018, http://www.athenaplus.eu/.
[11] A*RT NOUVEAU–Sustainable protection and promotion of Art Nouveau heritage in the Danube Region*, accessed April 16, 2018,
http://and.civitat.com/AND/?#zoom=5&lat=5558767&lon=2357746&layers=B00.
[12] Museum of Contemporary Art in Zagreb, accessed April 16 2018,
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[13] National and University Library in Zagreb, accessed April 16 2018,
https://digitalna.nsk.hr/pb/.
[14] *Dr Josip Kovačić Donation of the works of Croatian women painters born in the 19th century*, accessed April 16 2018, http://www.donacijegz.mdc.hr/kovacic-introHR.html.
[15] *Marinko Sudac Collection*, accessed April 16 2018, https://www.avantgarde-museum.com/hr/museum/kolekcija/radovi/.

collection of large amounts of data in real time, high *variety*–mostly unstructured data, available in various forms and sources and, lastly, *veracity*, which refers to the accuracy of data in relation to the real world.[16] For the history of art, these concepts raise a permanent question as to how much we can believe in the digital reproduction of the work of art, and how reliable are the metadata, especially when we consider online access to large amounts of visual data from mostly unreliable sources. Big image data technology enables the collection and processing of large amounts of structured and unstructured data in real time. Merely an academic discussion until recently, big image data has slowly been turning into tangible, concrete projects. The potential for its application has been affected by various scientific research areas with extensive advances in information technologies, so that, at the current stage, processing speed and storage capacity are no longer a limitation.

Klinke argues that "data analysis for Art History means the introduction of quantitative methods into a field that has used exclusively qualitative methods throughout its existence."[17] However, he cautions that quantitative methods cannot substitute conventional methods, but could be used as an addition, potentially resulting in new hypotheses.

One of the biggest BID implementation projects is PHAROS, an international consortium of fourteen European and North American art historical photo archives, established in 2013.[18] PHAROS put up a digital open-source research platform containing about two million photo archive images, with the main goal of stimulating the research in a broad spectrum of fields by linking together all of the images and their formal documentation with knowledge amassed by scholars over the years.[19] The project is of immense value to visual art historical research, investigating image similarity and de-duplication software, by using technologies from the field of computer vision.[20] Another well-known visual arts project is the Google Arts & Culture platform, tending to be more for civilian, rather than

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[16] Harald Klinke, "Big Image Data within the Big Picture of Art History," *International Journal for Digital Art History*, 2 (2016): 26, accessed April 20 2018, doi: https://doi.org/10.11588/dah.2016.2.33527.

[17] Klinke, "Big Image Data," 28.

[18] *PHAROS: The international consortium of photo archives*, accessed April 16 2018, http://pharosartresearch.org/home.

[19] *PHAROS Summary of Concept and Goals*, accessed April 16 2018, http://pharosartresearch.org/summary-concept-and-goals.

[20] John Resig, "Using Computer Vision to Increase the Research Potential of Photo Archives," *The John Resig Blog*, https://johnresig.com/research/computer-vision-photo-archives/, accessed April 20 2018.

research-oriented use, comprising a large number of collections and virtual exhibitions.[21] The platform offers the possibility of browsing through many subgroups of digital images, such as artists, themes, art movements, mediums, places, etc. Mentioned projects, as well as similar ones, pave the way for the future development of digital art history, which will significantly change the perspective of the traditional field. However, in Croatia, there are still many steps to take before the scientific and cultural community can create such a unified and powerful platform, mainly because of the small amount of digitized image material, and lack of government funding for such projects.

Digital collection of the Croatian Academy of Sciences and Arts

The digital collection of the Croatian Academy of Sciences and Arts[22] (DiZbi CASA) is a unified institutional repository, containing the digitized materials of the Academy's scientific-research and museum-gallery units, and the Academy Library. It was designed to present a variety of Academy materials in a digital format on a single platform, and to provide free online access with modern and standardized technical support. We present here a short history of the creation of the Digital Collection since 2009, when the project was initiated and established by the Academy Library's DiZbi coordinator unit. The first units to join the Library initiative were The Fine Arts Archives and The Institute for the History of Croatian Literature, Theater and Music, with its three divisions. To date, eleven more units are involved in the project: The Archives, The Glyptotheque, The Croatian Museum of Architecture, The Croatian Museum of Medicine and Pharmacy, The Adriatic Institute, The Department of Prints and Drawings, The Division of Ethnology (of The Institute of Historical and Social Sciences), The Division for the History of Medical Sciences (of The Institute for the History and Philosophy of Science), The Strossmayer Gallery of Old Masters, The Institute for Scientific and Artistic Work in Osijek, and The Institute for Scientific Work in Varaždin. Due to the large number of diverse content providers, the collection offers profound insight into many different scientific and artistic Academy holdings and activities (Figure 7-1).

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[21] *Google Arts & Culture*, https://artsandculture.google.com/?hl=en, accessed April 20 2018.
[22] *Digital Collection of the Croatian Academy of Sciences and Arts*, accessed April 16 2018, http://dizbi.hazu.hr.

Figure 7-1. Main page of the Digital Collection of the Croatian Academy of Sciences and Arts, screenshot

Criteria for selecting materials for digitization are based on the principles of scientific, cultural, and historical values and interests, and the preventive protection of old and rare specimens and artefacts, as well as the presentation of scientific research, art, and publishing CASA activities. In the context of visual resources and the aforementioned theories, the DiZbi platform is a good example of the interoperability of different types of images, text, and video. The visual artwork is presented within five Academy, museum, and gallery units, and the Fine Arts Archives.

The Fine Arts Archives were the first to join the Academy Library's efforts to establish CASA's digital collection in 2009, providing digitized catalogues of exhibitions of Croatian artists, later adding digitized photograph material and archival documents. So far, the archive's art historians have curated two virtual exhibitions; *Pablo Picasso - 80th Birthday Celebration, Vallauris 1961*, and *Salon Ullrich–the first Zagreb private gallery*.

The Glyptotheque joined DiZbi in 2011, providing selected digitized artworks presented at its permanent exhibitions. Digitized content is organized according to the Glyptotheque collections: Croatian sculptures from the 19th to the 21st century; plaster casts of fragments of the immovable Croatian cultural heritage (9th to 15th century); plaster casts of works of sculptures of antiquity; and stechaks; copies of frescoes from the 11th to the 16th century. The repository also has a virtual exhibition, *Od tvornice do muzeja–Gliptoteka HAZU* (From factory to museum–Glyptotheque CASA)*, marking the 80 year jubilee of its foundation.

The Strossmayer Gallery joined DiZbi in 2011, uploading a number of artwork objects from its permanent exhibition of Old Masters, and photographs from the photo archive of Artur Schneider, one of the first Croatian researchers to systematically catalogue and photograph cultural monuments. Recently, some of the items from the Đakovo Cathedral post, press clippings, and catalogue collection have been also added to DiZbi.

The Croatian Museum of Architecture's holdings include archives of designs, drawings, models, photographs, slides, correspondence, and other material related to the history of Croatian architecture. Some of the items represented at DiZbi platform include photographs and architectural plans from the archive of architects Vladimir Turina and Stjepan Hribar. The newest addition to DiZbi group is The Department of Prints and Drawings with several digitized items from its Poster Collection.

By providing digital images and elaborate metadata online these Academy institutions have provided the opportunity of faster access to distant content, obtaining more complete information before visiting the actual collections. By creating a new dimension of communication between GLAM (galleries, libraries, archives, museums) institutions, and users, the transparency of the data increases, and the access to the materials becomes democratized.

Portal technical characteristics and search possibilities

In developing this type of platform to its full potential it is necessary to start from the end user viewpoint. Thus, a general search of the content should

be maximally simplified and adapted to user's needs, providing the opportunity for quick and easy search, as one of the most important functions of digital platforms with such a variety of content. In the CASA Digital Collection, search is possible through built-in metadata search algorithms. While text files can be searched by full-text, visual content is described, and can be searched exclusively through metadata, tags, and references.

Different metadata profiles and their display are used, according to the type of the original items (books, manuscripts, photographs, artworks, etc.). The system uses data packages to ensure metadata interoperability and a unified view, since it is of considerable importance whether a digital image is referring to sculpture, musical composition, painting, magazine, or ongoing editions of 1,000 pages. Metadata are structured according to several standards (UNIMARC, EAD, CIDOC, etc.), and unified by software through joint profiles.

The design of the interface, and the structure of the repository, have been continually evolving since the establishment of a digital collection, with the main criteria being a reliable and fast-paced way of obtaining information, enabling scientists and researchers to quickly access digital content from anywhere, at any time. In the process of adding new Academy units and content to the Digital Collection, the awareness of the need for a more structured platform, more accessible to the end user, is growing, so it is necessary for technical features to keep track of the project progress.

The front-end allows easy access to data classified by Academy units and their specific collections, persons, locations, and collections, and includes a search engine that works according to the above-mentioned principle. Each digitized item can be searched through several layers of metadata, providing a more detailed view at next level, logically leading the user to the subject of his/her interest. The first level of presentation offers an overview of the individual Academy unit where items are very clearly categorized by collections, localities, data, authors, and materials. The second level includes the data categories of a particular collection, and its digitized objects, distributed in the same logical set (Figure 7-2). By choosing a particular item in the required collection the user comes up to the third level, where all metadata are available, with the possibility of displaying the image in the browser.

Figure 7-2. Second level preview of selected digital item, screenshot

Some of the images of precious and rare documents and artworks are presented through Silverlight technology, which allows a view of the image down to its finest details. This technology enables high-speed display of high-resolution images, as well as a specially developed browser that opens multiple-page documents at a high speed per page. This technology allows quick and efficient usage, the key factor of the functionality of this type of repository.

In addition to being available in the repository for search and browsing, the content can be downloaded entirely or in parts. The images, such as reproductions of artwork and photographs, are presented in .jpg format, while textual content, such as books, catalogues of exhibitions or drawings are filed in .pdf format. All visual materials can be downloaded, subject to prior acceptance of the terms of use. Visual resources are available to download in reduced resolution, while high-resolution master files in TIFF format are stored on Academy units' servers. Additional protection from potential misuse is a watermark DIZBI.HAZU that covers each file.

The CASA Digital Collection is supported by IT experts from ArhivPRO company, which offers its product ArhivX as a repository

platform, made up of a number of components to build a digital repository for storing, searching, and reviewing, content over the internet. The system does not set restrictions on the type or format of documents that are stored in the repository, and is consistent with the international OAI standard which facilitates dissemination of repository content. It is built in a three-layer (web) architecture with JAVA, JavaScript, Ajax and PHP technology, and uses the Apache web server and MySQL database. The system provides the definition of access rules for each individual document within the system, and defines user rights and access to documents. It is possible to separate parts of the repository that are allowed to be accessed only by authorized users, and to define the rank of IP addresses from which it is permitted to access the entire, or protected, part of the repository. The system also allows multiple search modes, from full-text content search, bibliographic information, article search in active digital book index, or alphabetical title or author list. An intuitive browser which does not require further installation of any software add-ons on a client computer is installed. Different types of materials can be linked to a common context, and the digital records can be stored and downloaded in any format (pdf, jpg, png, tif, doc, xls, avi, mp3).

Most of the classic web pages on the internet offer images in low resolution and small format, given that high resolution images need more loading time, making user interaction more difficult. The above-mentioned big file problem and slow system response is one of the main reasons for users to give up browsing the digitized portal content. The basic task of the Academy's repository is to provide quick and accurate information, with the satisfaction of browsing the content in the best possible quality. For faster display of high-resolution images, ArhivX uses several technologies: JAVA, PHP, C #, .NET, and the already mentioned Microsoft Silverlight (Figure 7-3). All repository activities are monitored statistically, with the possibility of graphing the results for each unit or for the entire repository.

There is currently a migration of CASA repository to the new, so called, INDIGO platform, which will offer a more functional way of harmonizing and linking normative databases. Apart from its built-in modules and web services for online viewing and digital collections management, the Indigo platform also has the ability to run primary and secondary museum documentation, and offers new modules developed for communication and data exchange with other systems, using the many possibilities of semantic web technology. The same system enables and aggregates metadata to Europeana and its data models ESE and EDM.
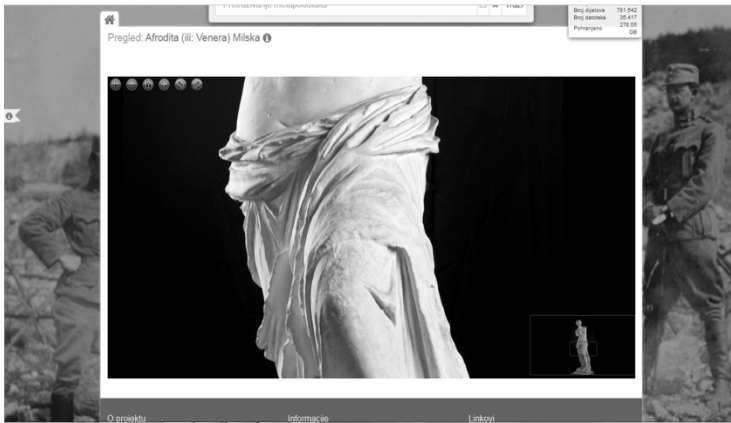
Figure 7-3. Detailed preview of selected unit in Silverlight technology, screenshot

Visibility through metadata

At CASA Digital Collection, metadata visibility is present through several levels, mainly through the various metadata displays referring to individual digital objects/images. A special category of presenting CASA digitized images is virtual exhibition, a hypermedia collection of thematically connected digital units in the virtual space. In the context of digitized and digital art history, this kind of presentation of digitized items presumes the usage of digital art history. A digitized content of virtual exhibition, inlaid into interdisciplinary context, provides artistic and scientific insights beyond the reach of traditional art history.

As Foo points out:

> online virtual exhibitions are acknowledged as important complimentary counterparts to physical exhibitions. They overcome space, time and location restrictions […]. Well-constructed virtual exhibitions can offer alternative experiences to the 'real thing' and open up other opportunities that include learning, more content beyond physical exhibits, active participation and contribution by visitors through forums and uploads, and others.[23]

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[23] Schubert Foo, "Online Virtual Exhibitions: Concepts and Design Considerations**,**" *DESIDOC (Defence Scientific Information & Documentation Centre) Bulletin of Information Technology*, 28,4 (2008): 22, accessed April 16 2018, https://pdfs.semanticscholar.org/f3ad/4af7221639ecc0f767126440c93c8827257d.pdf.

Currently there are four virtual exhibitions on the repository, three of them bilingual (Croatian and English): *Pablo Picasso–80th Birthday Celebration–Vallauris 1961*, *Salon Ullrich–the first Zagreb private gallery*, both made by Fine Arts Archives; Glyptotheque's *Od tvornice do muzeja–Gliptoteka HAZU* (From factory to museum–Glyptotheque CASA) and joint CASA exhibition project *The First World War,* which includes digitized material of six Academy units (Figure 7-4).
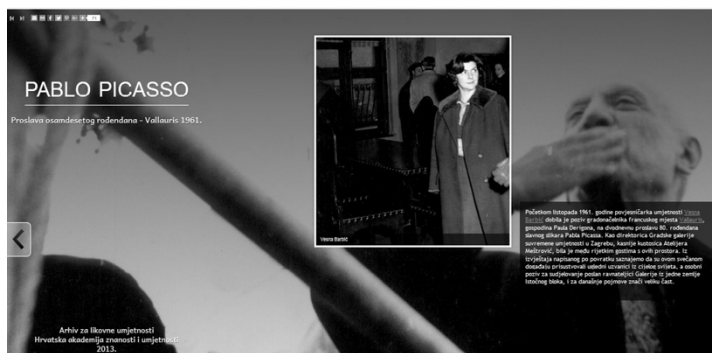
Figure 7-4. Virtual exhibition *Pablo Picasso–80th Birthday, Vallauris 1961*, screenshot

All of the exhibitions were made using secondary museum documentation and archival digitized materials of individual Academy units, and, in the case of the First World War exhibition, of six participating Academy units. Through this multimedia-shaped content in the virtual space, digitized items of the different kinds of institutions can be linked thematically through the metadata, placing them in a joint historical context or theme. In this digital format it is much easier to present larger quantities of different, and less accessible, materials, thus making them more accessible and visually attractive in the virtual space. One of the most valuable advantages of virtual exhibitions is seen in hypermedia promotion of cultural heritage. Of great importance is also its educational function, as well as the visibility of unavailable and scattered material: the easier presentation of a larger quantity of material, the function of protection of the material that is not suitable for exposure, contextualization, and certainly the lower cost of its production. Virtual exhibitions thus provide a good example of stimulating co-operation between GLAM institutions that preserve the cultural heritage, of their metadata linking, which are scientifically structured, easily accessible, and searchable.

Within Glyptotheque's permanent exhibition, a Quick Response (QR) code technology is implemented: certain objects are linked to a QR code image, directly leading to the item and its metadata at the CASA Digital Collection (Figure 7-5).

Figure 7-5. QR Codes in permanent exhibition of Glypthoteque CASA, photo: M. Getaldić 2015

Aside from metadata and extended content, there are also few 3D models, interactive Google maps, and references for more information about the particular item.

In addition, The Strossmayer Gallery of Old Masters is using navigation application, called iBeacon technology, navigating the museum's permanent display, in order to automatically get richer information on exhibits. Through the described forms of virtual exhibitions and QR codes, the importance of, and need for, well-structured metadata is evident. To meet the increasingly demanding needs of the scientific community, the

functionality of the repository will, in the future, also enable the connectivity of the objects of different types of materials, through multiple levels, through semantic web possibilities.

National and international collaboration and projects

In order to make the content of the Digital Collections of CASA visible beyond the repository system, DiZbi is collaborating with various European projects and portals. The importance of cross-linking various institutions and the pooling of multi-source material achieves the interpretation of heritage on a level that can satisfy both the scientific research community and the general population.

From 2013 to 2016, the Digital Collection of CASA has been included in the Europeana Cloud project, *Unlocking of Europe's Research via The Cloud*, with the aim of building a cloud-based technology for the needs of researchers from the socio-humanities and users of Europe's largest digital library.[24] From 2016 onwards, DiZbi's metadata were aggregated to Europeana, the largest European digital library. By presenting the digitized materials of the CASA units to Europeana, the Academy's goal is to show its valuable and diverse holdings, to provide a unique place for accessing digital and digitized sources, and to connect them with information systems in the world, thus providing international users with digital content, modern concepts of access, and use of cultural and historical heritage (Figure 7-6).

In 2017, CASA Library initiated a new digital project, the thematic portal *Znameniti i zaslužni Hrvati* (Famous and meritorious Croats), in collaboration with The National and University Library, Zagreb City Libraries and the State Archive in Varaždin.[25] The aim of the project is to establish a foundation for the gathering and unified search of digital metadata of Croatian cultural, artistic and scientific institutions by building a digital portal of the greats of Croatian culture, science, art and public life from different collections and repositories. The purpose of the project is to provide greater accessibility to, and use of, non-commercial scientific, cultural and artistic digital content, to researchers and the general public.

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[24] Vedrana Juričić, Nataša Daničić and Kristina Polak Babić, "Projekt Europeana Cloud (eCloud) u Hrvatskoj akademiji znanosti i umjetnosti," *Arhivi, knjižnice, muzeji*, 18 (2015): 241-253.
[25] *Znameniti i zaslužni Hrvati*, accessed April 16 2018, http://znameniti.hr.
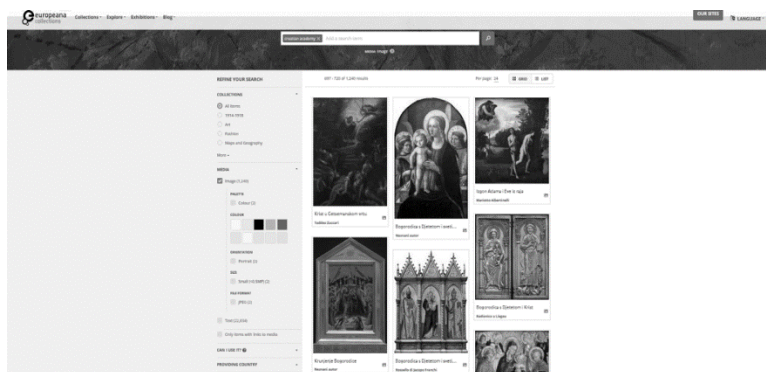
Figure 7-6. Digital material of CASA on Europeana Digital Library, screenshot

Other institutions with digital collections or repositories with valuable contributions to the famous personalities of the Croatian past and present have joined the project in the second phase: Miroslav Krleža Institute of Lexicography, Institute of Ethnology and Folklore, Museum of Arts and Crafts and Centre for Women's studies Zagreb. With the financial support of DARIAH-HR (Digital Research Infrastructure for the Arts and Humanities in Republic of Croatia), the Croatian project is currently expanding, through the collaboration with Slovenian and Bosnia and Hercegovinan partners, to the thematic portal, with the work title *Znameniti.eu*.[26]

Through its metadata, CASA Digital Collection is also present at the Getty Research Portal, a free online search platform providing worldwide access to an extensive collection of digitized art history material from a range of institutions.[27] This multilingual and multicultural union catalogue provides the ability to search and download complete digital copies of publications devoted to art, architecture, material culture, and related fields.

Conclusion

After the description of basic theoretical postulates of digital and digitized art history, as well as the presentation of the repository and the CASA

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[26] *Znameniti.eu*, accessed April 16 2018, http://dariah.hr/hr/dogadjaji-i-aktivnosti /projekt-okviri-suradnje-digitalnih-infrastruktura-u-regiji-mogucnosti-i-potrebe-na-primjeru-gradje-o-znamenitim-licnostima-znanosti-i-kulture/.
[27] *Getty Research Portal*, accessed April 16 2018, http://portal.getty.edu/.

Digital Collection through the prism of its digital images of the art history field, one problem, to which Jaskot refers in his text, comes to mind:

> The question is not what art history can do with the digital; the question is what are the important art historical questions that can be addressed with the help of digital tools?[28]

We think that the foundation of any research in the digital art history field is the existence of repositories like the CASA Digital Collection, which is constantly growing and developing, and not only providing digitized content, but getting closer, albeit with slow steps, to the digital history of art, via its functionalities and interoperable mode of presentation.

Outside of the repository's frame, it is important to emphasize the importance of its visibility through rich metadata, by incorporating and networking through various European projects and portals. As the interpretative digital art history in Croatia is still in its infancy stage, it is of paramount importance to establish a network of various institutions, so that by gathering more digital material and metadata, we achieve an interpretation of the heritage at a level that can be of use for more efficient and thorough research.

The CASA Digital Collection's features, and its networking with other institutions, are the framework for creative development and the content enhancement, metadata development, and heritage interpretation, which, along with further research and networking, can serve as a starting point for approaching what is described in the literature as digital art history.

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[28] Jaskot, "Debates in the Digital Humanities," 140.

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CHAPTER 8

FROM ANCIENT MANUSCRIPTS
TO DIGITAL SCREENS:
SYRIAC LITURGY IN DIGITAL HUMANITIES

EPHREM ABOUD ISHAC

Abstract

This chapter presents the representation of Syriac–Aramaic heritage in digital humanities, which can be useful to consider in comparison to how other ancient cultures such as the Croatian heritage are treated in the digital humanities. Syriac has been the literary language for many Church communities, preserving a unique literature in thousands of manuscripts. The Syriac Christian communities have been living in persecuted situations for centuries, but have preserved their Syriac writings in manuscripts, copying them regularly and emphasizing the intimate relationship between books, scribes, and a prayerful community, creating an atmosphere of 'spiritual intimacy'. Today, within the new digital age, these communities are able to develop some systems and concepts for transferring this ancient heritage to digital methods to answer the challenges of renewal and actualization (especially in liturgy). This chapter discusses the problematic question of how to install some proper digital systems without challenging authentic factors of ancient heritages.

Keywords: Syriac, liturgy, digital texts, manuscripts, @Worship

Introduction: the beginning of the Syriac digital humanities

Those who go to Graz can easily notice the unique building of Grazer Kunsthaus (the Graz Modern Art Museum) which was built as part of the

celebration of Graz as the European Capital of Culture in 2003. The London architects who designed Kunsthaus Graz, Colin Fournier and Peter Cook, wanted to design a building that could address the new digital age that is shaping our third millennium.[1] They called the project: "Up to the Unknown", which reflects the expectations of a new digital world full of ambiguities, and possibly one that is uncontrollable. This chapter presents the experience of digitality in Syriac liturgical life. Thus, the focus here is on spirituality in digital humanities, taking the experience of Syriac ancient tradition as an example.

Syriac is a language derived from the ancient Aramaic dialect of Edessa, which was firstly attested in Edessa (South East of Turkey today) in the early days of Christianity.[2] During the 4th century, the Syriac language became popular among many nations in the Orient, especially since it was supported by Christian missionaries reaching the eastern parts of the Roman Empire. It produced a rich literature, which flourished among theological and philosophical schools in Greater Syria and Mesopotamia. Syriac became the *lingua franca* in the Church under the Persian Empire (East Syriac), even reaching China and India. An important version of the Bible is still presented in Syriac (Peshitta), indebted to ancient Aramaic versions, and this is still an important biblical source, in addition to the Latin and Greek versions.[3] Moreover, Syriac played a crucial role in the movement of translation from Greek to Arabic, which flourished with the rise of Islam in the Middle East from the late 7th century. Important Greek philosophical works could be translated into Arabic *via* Syriac as a mediatory language.[4] On the other hand, many translations were done from Arabic to Syriac, especially in medieval times, or what is called by historians 'the Syriac literature Renaissance'.[5] This ancient language could be preserved until

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[1] For more detailed information about this unique building, see: Peter Cook and Colin Fournier, *A Friendly Alien: Ein Kunsthaus für Graz* (Ostfildern-Ruit: Hatje Cantz Publishers 2004)

[2] For further reading: Sebastian P. Brock, and David G.K. Taylor, *The Hidden Pearl: The Syrian Orthodox Church and its Ancient Aramaic Heritage* (Rome: Trans World Film 2001)

[3] For a broader image of the Syriac Biblical heritage, see: Sebastian P. Brock, *The Bible in the Syriac Tradition. SEERI Correspondence Course on Syrian Christian Heritage 1* (Kottayam: St. Ephrem Ecumenical Research Institute 1988)

[4] For further introduction about Syriac literature, see: Sebastian P. Brock, *An Introduction to Syriac Studies. Gorgias Handbooks* (Piscataway/New Jersey: Gorgias Press 2017)

[5] See: Herman G.B. Teule, "The Transmission of Islamic Culture to the World of Syriac Christianity: Barhebreaus' Translation of Avicenna's *Kitāb al-Išārāt wa l-Tanbīhāt*. First Soundings," in: *Redefining Christian Identity: Cultural Interaction*

today by few Church communities in the Middle East and India, in addition to a new remarkable existence in diaspora (Europe and America).

In 1993, Sebastian Brock, the world's leading scholar of Syriac studies, wrote in the foreword of George Kiraz' *Computer-Generated Concordance to the Syriac New Testament*, the following words: "it marks a very successful marriage of Syriac scholarship with the 'Electronic Age', especially in the field of Literary and Linguistic Computing."[6] Brock couldn't have been more prescient. Since that time, the work on Syriac Studies started to cooperate, or rather depend on, the digital world, culminating in what we know today as "Syriac Digital Humanities". Kiraz successfully added the Syriac alphabet into the Unicode Standard, reserving an independent Unicode block for Syriac language, which contains characters for various fonts of Syriac scripts, including the Estrangela, Serto, Eastern Syriac, and Christian Palestinian Aramaic variants. The main goal of this Syriac digital revolution was to focus primarily on computational linguistics, especially digital lexicography. However, later, other scholars started to build many projects to broaden the field of Syriac Digital Humanities. Moreover, since Syriac is still a living heritage language, spoken and used liturgically by the followers of this church tradition, Syriac digital culture could easily be introduced inside churches.

Syriac digital tools inside churches

In this context, digital technology was not restricted to professional fields (Syriac Digital Humanities in Linguistics, Historiography, manuscripts, literature, etc.), but entered churches to help communities during prayers.[7] It happened for one simple reason – the lack of understanding of Classical Syriac in the liturgy. Therefore, digital instruments could offer a convenient solution to present texts with proper translations and transliterations, to help faithful worshippers in following prayers. However, this development could spell the end for traditional methods of prayer, which has the potential effect of eroding other significant elements as well. The Syriac Christian communities were living in persecution, yet were still able to preserve their

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in the Middle East since the Rise of Islam, ed. by J. van Ginkel, *Orientalia Lovaniensia Analecta* 134 (Leuven: Peeters, 2005), 167–184.

[6] Sebastian P. Brock, foreword to *A Computer-Generated Concordance to the Syriac New Testament: According to the British and Foreign Bible Society's Edition Based on the SEDRA Database*, by George A. Kiraz (Leiden; New York: Brill, 1993), ix.

[7] For further discussion see: George A. Kiraz, "Computers in the Future Life of the Syriac Orthodox Church," *Voice of the Archdiocese*, 4[3] (New Jersey: 2000), 14–18.

Syriac prayers in manuscripts, copying them regularly and emphasizing the intimate relationship between books, scribes, and the prayerful community, helping to create an atmosphere of 'intimacy'. For example, the choir "gudo ܓܘܕܐ" used to gather around the table of 'gudo' which carries the manuscript of prayers standing in a circle. The head of the choir table ܪܝܫ ܓܘܕܐ has the professional experience to direct the signers and the deacons in prayer, akin to a teacher of the liturgy inside the church. The liturgical manuscripts themselves usually have many remarks in the margins and in the colophons. The scribes may ask those who are singing to pray for them! This phenomenon is what is often considered 'intimacy', as the scribes were expecting that those who read these liturgical manuscripts were faithful worshippers and would fulfil the requests of prayers for them. The delight of communicating with the past through prayers is an experience shared by clerics and deacons who prayed to let the memories of those scribes remain in perpetuity.

Journey to the past: From printing to digitality

Indeed, it is true that digital tools could achieve the dreams of many scribes who would wish to present texts in a fast and accurate manner. I think we can draw a similarity between the invention of printing, and digital text production. One of the best examples may be Moses of Mardin, from the 16th century, who was a scribe of many Syriac manuscripts. Once he heard about the invention of printing in Europe, he travelled to Rome,[8] in order to achieve his dream of printing the Syriac Gospels, which he accomplished in Vienna in 1555. It was the first time in history a book was printed in Syriac, and since that time, the West has been able to learn about Syriac Christian literature. Now let us take a parallel example from the 1980s, which involved the Syriac Archbishop of Europe, Mor Julius Cicek (2005†). Cicek was a scribe for many liturgical manuscripts (with many notes in the margins or at the end of some prayers, where he requested prayers for his soul), and a publisher of many Syriac books. He was impressed by the new possibility that George Kiraz could install a software to type in Syriac on IBM computers. For the bishop, it was an incredible evolution which would save a lot of time and effort in producing Syriac texts. There is no doubt that digital technologies could provide new methods of sharing the knowledge

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[8] For more details about Moses of Mardin, see: Pier Giorgio Borbone, "'Monsignore Vescovo di Soria', also Known as Moses of Mardin, Scribe and Book Collector," *Христианский Восток*, 8[14] (2017): 79-114.

inside manuscripts and books, but at the same time, it could kill the delight of praying and being in communion with the age-old scribes.

In today's digital age, these Syriac communities could develop some systems and concepts for transferring this ancient heritage to digital methods, to answer the challenges of renewal and actualization (especially in liturgy). The goal of this chapter is to study this new phenomenon to add some morals and spirituality in digital humanities.

Between yes and no to digitality in Syriac churches

While interviewing some of the parishioners in different Syriac churches (in the Middle East and in diaspora), we can notice two attitudes regarding the use of digital visual tools in following liturgies (usually through projectors on screens, or on big digital screens inside the churches). For those who take a positive attitude, their argument is that it is better to be able to follow the prayers and understand the meanings with an excellent visual method. For them, these new digital tools are perfect pedagogical instruments to help those who pray to participate properly in the reading of the liturgy, especially when they cannot understand the liturgical language (Syriac in this case). It also helps them to interact visually with some electronic icons taken from ancient Syriac manuscripts, allowing them to communicate better with the spirit of their ancient tradition.

Conversely, those who take a negative attitude, argue that it is not appropriate to use digital devices in churches because they lose the feeling of intimacy with the ancient heritage. Moreover, digital screens in churches disturb the prayerful community and scatter their attention. For deacons, nothing is a more unique spiritual experience than standing together with parishioners to pray in choir circles. Somehow, through this technology, they have lost the essential emotions which they need to pray with sincerity. In addition, electronic devices might be dangerous, in terms of lacking a control of materials which might, mistakenly and easily, interrupt the unique liturgical atmosphere during prayers.

These attitudes present contradictions which reflect the complexity of answering many questions concerning the use of digital elements in worship. In fact, regardless of the diverse attitudes, digital mediated forms have been developed over the last decade, offering fine solutions to balance between tradition and modernity in liturgy. Those who follow liturgies through digital screens in church halls (which can be a perfect place for parents with little children to have the opportunity of participating in liturgy without interrupting others, or when small churches are full, preventing worshippers from being inside the main church) are considered to be

actively engaged in liturgical participation. In the case of many Orthodox churches (such as the Syriac Orthodox Church) where locations of some holy places can be highly important for the church community in diaspora (for example: tonsuring a monk in one of the ancient monasteries in Tur Abdin), digital media, with its highly developed interactive technologies, enables worshippers from different parts of the world to join liturgies even though they are not physically present where liturgy is celebrated. According to T. Berger:

> Such forms of digitally mediated active participation in prayer and worship will only expand as media technologies continue to develop, and ever more sophisticated networks emerge.[9]

Delight of using Syriac manuscripts in liturgy

We cannot deny the fact of losing essential feelings which accompany the traditional style of praying from ancient manuscripts. The unique experience of touching an ancient manuscript is shared by S. Brock, when he writes about the "delights of manuscripts". On reading the oldest dated Syriac manuscript (411 AD), he says: "It does not take much imagination to find oneself transported back across time and space to Edessa in November 411."[10] Therefore, we should ask: can we install digital Syriac texts in liturgy, but also protect the authenticity of feeling? This is a difficult challenge in the digital age, although many projects of Syriac digital humanities are aware of this, and attempt to offer their best proposals to protect such intimate relationships, involving, e.g., a divine codex, with those who use it for worship. We can take for example the initiative of VESTIGIA (The Manuscript Research Centre of Graz University), which works to present Syriac liturgical manuscripts in digital forms without compromising the value of the codex.[11] The goal is to protect this unique human heritage, especially when it is threatened by wars, natural disasters, etc. With the project of Syriac Anaphoras, the target is to produce a comprehensive database of Syriac Divine Liturgies (about 90 Anaphoras), to balance the concepts of protecting manuscripts and presenting texts.

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[9] Teresa Berger, @ *Worship: Liturgical Practices in Digital Worlds* (London; New York: Routledge, 2018), 22.

[10] Sebastian Brock, "An Introduction to Syriac Studies," in: *Horizons in Semitic Studies: Articles for the Student University*, ed. by J.H. Eaton (Birmingham: University of Birmingham, 1980), 27.

[11] *VESTIGIA (lat. »Spuren«) – Zentrum für die Erforschung des Buch- und Schrifterbes*, last modified June 19 2018, https://vestigia.uni-graz.at/de/.

Another example is the Syriaca.org project, which states that its mission is to protect Syriac heritage in the world of digital humanities: "In the digital era, this potential for discovery continues, and has even expanded, as new technologies promise to open up new methods of access. It is in this spirit that Syriaca.org has tried to pay particular attention to method and technique, so that the delight of these manuscripts can be shared with new readers and new audiences well into the future."[12] Therefore, although it is a challenge to protect the peculiarity of working on the ancient Syriac manuscripts in the development of the digital generation, it is, however, a bonus, given that few digital humanities projects are aware of how to help an ancient tradition to survive in the world of digitality by proposing some solutions. In fact, it is a matter of missionary vision to help regular people to access the Syriac Church Fathers, as this ancient heritage is not only for scholarly purpose, but for all humanity. Nowadays, with the support of digital humanities, it has become the responsibility of scholars to establish a bridge through various digital tools in order to make these ancient spiritual texts (such as the case of Syriac literature) available to everyone, by creating an open access database online. These should not be considered private documents, but those of ancient writers who contributed to developing human civilization for all humans. In this context, we can conclude that digital worlds can help to let ancient literature speak through the new megaphone of the global digital network. If we take for example, St Ephrem the Syrian (373†), his works are very important in clarifying the relationship between humanity and the spiritual world, which is urgently needed in the face of the conflicts of modernity.

Suggestions to balance digital tools and Syriac tradition

One of the solutions presented by the Syriac community to preserve the feeling of praying with handwritten texts, is installing new fonts, like those found in manuscripts, such as the Syriac font of "Serto Sleyman dbe Haushab". Another solution is to present some ancient manuscripts which include liturgical texts, with beautiful scripts and manuscript decorations.

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[12] David A. Michelson, "Mixed Up by Time and Chance? Using Digital Media to 'Re-Orient' the Syriac Religious Literature of Late Antiquity," *Journal of Religion, Media & Digital Culture*, 5[1] (2016), 171. About *Syriaca.org: The Syriac Reference Portal*, last modified June 19 2018, http://syriaca.org/about-srophe.html. See also: Nathan P. Gibson, David A. Michelson, and Daniel L. Schwartz, "From manuscript catalogues to a handbook of Syriac literature: Modeling an infrastructure for Syriaca.org," *Journal of Data Mining & Digital Humanities*, 1395 (2017), accessed June 19 2018, https://jdmdh.episciences.org/1395.

Those who follow such liturgies could be linked with the feeling of relating to ancient sacred texts through digital screens inside churches. In fact, this development could help to increase the essential liturgical principle of participation ܪܚܫܘܬܐ by presenting ancient liturgical texts to the whole community, rather than being only the privilege of a close circle around a liturgical manuscript on the choir ܓܘܕܐ table. In this context, the digital age could help to improve the liturgical celebration to include the whole liturgical community, while printing could help as well, but on a limited scale.

Moreover, we can add another remark concerning digital humanities sharing data to be used in parishes. Since there are only few people who are able and interested in building Syriac liturgical databases in different digital formats, although many parishes would like to use them, the result is shared Syriac electronic data, circulated with little adaptations for each parish. This phenomenon could lead to a fixation of Syriac liturgical electronic texts in many cases, but with the risk of circulating the same errors without a control on these electronic texts. In addition, the Syriac language and fonts present another challenge; there are many typed texts which were prepared during different times, before and after installing the Syriac language in the Unicode system, which involved Syriac fonts which were designed according to English or Arabic languages. This creates a serious problem in our time, since the web engine cannot recognize these texts as Syriac, but instead as the original languages of these Syriac fonts (English or Arabic). Syriac parishes use these texts, with their various backgrounds, and this creates many difficulties of consistency, and sometimes misleading search results, especially when they are uploaded for the web search engines. It is always a question of how much trust can be given to the reliability of these electronic texts, and possibly there should be some efforts from church hierarchies to establish some rules to control digital liturgical texts.

How can specialists contribute to digital Syriac liturgy?

There are many questions to consider when dealing with liturgy in the digital age. In her recent book, Teresa Berger successfully launched the study of the modern phenomenon of prayer with the aid of digital tools. Many people would easily argue that with digital tools in liturgical worship, active participation is somehow unfeasible. However, it is the digital image which brings the faithful people closer to the unseen through mystagogic symbolism during the liturgical assembly. In past times, they were the painted icons, which garnered great respect in some church traditions. Nowadays, digital images can offer a similar symbolic function to that

which iconography could serve liturgically in the church, at least in the sense that it brings the hearts of the praying community closer to God, through a space made of symbols. This can then be extended as the transmission of a spiritual message between praying people with the realm of spirituality. Painted iconography in late antiquity history could even gain a theology in the Eastern Orthodox Churches. Though they symbolize saintly and divine persons, icons became a mystery to meditate in the unseen knowledge of truth. Interestingly, digital images and cyberspace are functioning somehow in a similar way, to portray in a pedagogic method in some religious lessons inside the church. It is only a matter of time before we see a theology of digital humanities which can be applied while studying liturgical theology.

Based on this fact, the traditional church has to find methods to present what they pray, and present components of their church tradition to the community of prayer. The diversity of digital tools could also help in a boring atmosphere, attracting youth and teenagers by appealing to their modern identity, though still in their Orthodox tradition. However, this optimistic view is not always the case, sometimes this might be an obstacle to following liturgy, scattering the focus of the community. For some theologians, modernity is still a problem. Let us imagine a scenario in which a world of science is lost, where humans cannot remember past achievements. So, if people were to use digital instruments without the framework of needs of each community, then we could not possess a general rule to create a standard for a liturgical community. Each circumstance has a particular context and a framework.

The question remains of how to study digital liturgical practices. According to T. Berger, one of the main challenges of studying the digital reality to be used in worship (audio, images and project streaming, etc.), is that we are not dealing with bricks-and-mortar stores. In digital humanities, the question has arisen of how to study these realities in transdisciplinary methodology.[13] Many centres of digital humanities at universities, which include various fields of gender studies, sociology, history, and other disciplines of humanities, are installed, and growing up remarkably. This can explain that the various fields of humanities are accepting the digital age as a reality, but also it infers that there is no certainty of how to deal with such a reality. Concerning digital liturgical studies, it is still a novel topic, but we are already having some academic discussions to talk about the liturgy in the digital age. Historically speaking, liturgy has always had to deal with different expressions of mediation of symbolism to establish a

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[13] Berger, @ *Worship*, 6.

spiritual communication through prayer with God. Here, it can be good to bring the arguments concerning previous sorts of media, or even using some contemporaries of art, in various historical times. Liturgical life could be open to accept inclusively the changeability of methods to be installed in worship. In the Catholic Church, we find that Pope John Paul II called this new phenomenon 'a new culture'. The development of liturgical digital tools is a healthy process, reflecting a harmonious correspondence between liturgy and the expressions of a new age. It shows a living religious reality, which is promising from a liturgical perspective. These observations can pave the way to study in closer sight the reality of digital usage in Syriac liturgy. This argument would not neglect the fact of facing challenges, and possibly dangers. Examples of this can be found every day in digital fake information without authenticity, which can be seriously dangerous in the framework of a liturgical or spiritual context. T. Berger mentions an example of fake news spread in some of the liturgical websites:

> There is also so-called fake news in circulation related specifically to Catholic practices of intercessory prayer. Fake calls to pray for persecuted Christians in Iraq and Syria, claiming either to originate from these Christians themselves, to from the people have made the rounds since 2014.[14]

Therefore, dangers coming from digital sources are always expected, and a faithful community should be careful, and question the reliability of many electronic and digital sources, which can be used in a wrong way.

Towards liturgical apps

The last comment of this paper is to notice the many Syriac liturgical smartphone apps which are gaining noticeable popularity in the church community. These apps can even personalize prayers with audio files to help users hear a liturgy with famous chants from the early 20th century, to feed the feeling of liturgical nostalgia. These mobile digital apps are gradually replacing some printed Syriac liturgical textbooks. This new religious practice tries to include some of the traditional symbolism in digital migrations, which could positively attract many young Syriac faithful people to follow liturgies (such as the daily office app) on smartphones and tablets. Although these apps have not yet reached some controversial points (such as practicing the sacrament of confession via

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[14] Ibid., 27.

online apps), at least they include many ritual elements, especially for users who find them an excellent method to remind them about times of prayer.

In concluding this chapter, I would like to mention a passage from Berger's book, which describes a scene from the ongoing Syrian war:

> I heard the story from a Syrian Orthodox colleague, who was talking about his friends, still remaining in Syria. These Syrian Orthodox friends had gathered one Sunday in the home of a Muslim neighbor who let them borrow his computer. The Christians brought bread and wine with them, which they set up in front of the screen. Via a webcam set up in a Syrian Orthodox Church in North America, these Christians in Syria were able to join in a celebration of the Eucharist–something quite out of the question in their own town. When the time came in the Divine Liturgy in which Christians in North America went to receive the consecrated elements from their priests, the Syrian Orthodox Christians huddled around the computer of a Muslim neighbour in the midst of a horrific war, and shared the bread and wine they had set up in front of the screen.[15]

The previous story is a good example of how digital liturgy is functioning within the cyber world, and the church is confronted by many new questions raised by the new digital generation, who will inherit the historical liturgy. This will surely become a new area of research in digital theology. The Syriac tradition is just one example of how an ancient church tradition is currently facing a complex theological struggle in the reality of digital sacramental practices. This situation can be applied to other cultural church traditions as well, such as the Croatian one. Traditions are offering the necessary resources to contribute to the quick development of the contemporary digital age; henceforth, it is the responsibility of digital humanities scholars to help in keeping spirituality and morals side-by-side with the vast digital development throughout the world. The world should continue to direct digital life towards moral progress to serve humanity.

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CHAPTER 9

MUSICAL HERITAGE:
"FROM ARCHIVAL DUST TO LIFE"[1]

IVANA TOMIĆ FERIĆ, KATICA BURIĆ ĆENAN AND DUBRAVKA KOLIĆ

Abstract

Just as archaeological excavations, after the removal of dust, imply a kind of connection between the past and contemporary interpretations, in the same manner, the exploration of musical sources requires constant recourse to all dimensions of their existence, through the past, present, and future. The objective of this chapter is to refer to the necessity of co-operation between various heritage institutions, as well as applying the principle of interdisciplinarity in the research of the past, in order to create as comprehensive an interpretation as possible. In this respect, the first part of this chapter discusses the musical sources found in the funds and collections of the State Archives in Zadar, and provides a detailed description of the same with regard to content and location within the funds, as well as the level of analysis and visibility for users. In the second part, through the prism of these sources, a fresh interpretation of one piece of Zadar's musical heritage is given: the Zadar Philharmonic Orchestra *(Società Filarmonica)*, the most valuable music company in Zadar in the second half of the 19th century. The third part of the paper looks to the future by introducing the latest scientific project *Dalmatian Music sources in the context of Central European and Mediterranean music culture from the 18th to 20th century* within the framework of the Croatian Foundation for Science. The project includes work on musical sources from Split, Zadar, Hvar, and Dubrovnik,

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for the purpose of reconstructing musical culture, and determining its role in creating a local, regional, national, and trans-national, cultural identity.

Keywords: musical heritage, archival sources, Zadar Philharmonic, Dalmatian musical sources, State Archives of Zadar, GIDAL

Introduction

By exploring the musical past, we often witness that archival sources are all that is left of it. However, the meanings we attach to these sources (documents) are essentially subjective, because they depend on the historical, social, cultural, and current context we live in.[2] Contemporary reading of archival sources should thus be a kind of dialogue between sources, the past, and historiography, but also today's cultural context. What, how, for whom, why? These are just some of the constant questions researchers ask concerning different heritage themes, for the purpose of working not only on the interpretation of the past or the preservation of heritage, but also for the purpose of raising awareness of collective memory and identity.

Sources for music history in the State Archives of Zadar

The structure of the materials of the State Archives of Zadar (DAZD) is typical of archives grown from the system of administration.[3] DAZD is an archival institution, founded in 1624, as the Archive of the General Governor (*Archivio generalizio*), with the authority to take care of the documents created in the office of the General Governor for Dalmatia. And after the political changes brought about by the abolition of the Venetian

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[2] In the recent past, the contents of archival sources were interpreted in terms of historical facts, neglecting the (non) existence of reality and 'truthfulness' when talking about the past. Suzanne Briet in her work *What is a document?* from 1851, precisely refers to the importance of not only cultural categories but also historical links and social forces that equally influence the creation of information as well as the interpretation of the same. See: Suzanne Briet, *What is Documentation?* English Translation of the Classic French Text by R. E. Day, Martinet, L., Anghelescu H.G. B. (Lanham, Md: The Scarecrow Press, 2006).

[3] The structure of the materials of the DAZD is clearly illustrated by the *Guide to the State Archives of Zadar*, which consists of two volumes, one of which covers the materials of the administration institutions, and the other, the judiciary and the materials of all the other classification groups. See: http://dazd.hr/vodic/, accessed April 2 2018.

Republic, and the Austrian and French takeover of Dalmatia, the archives continued to operate in the administration system, and thus influence the structure of the material that was concentrated in the archive repositories. There was a change only in the second half of the 19th century when, along with the primary administrative function of the Zadar Archive, its scientific function strengthened, that is, archival materials no longer served solely for the purpose of proving rights, privileges or property, but were also sought and studied in scientific research, mainly historiographic. In this period, we also note the first acquisitions of the materials which were non-administrative or possibly judicial, and in which one could expect to find individual or groups of documents that contained note recordings and other sources for music history. Over time, the number of such holdings and collections has increased, so today, the following holdings and collections containing sources for the history of music can be highlighted as the most significant and best explored. These are:

- HR-DAZD-379: Music Materials,
- HR-DAZD-386: Collection of Print,
- HR-DAZD-377: Miscellaneous,
- HR-DAZD-252: Teatro Verdi,
- HR-DAZD-515: Teatro Nobile,
- HR-DAZD-335: The Brotherhoods,
- HR-DAZD-433: Folklore Ensemble of Zadar,
- HR-DAZD-543: Governorship for Dalmatia. Societies in Dalmatia,
- HR-DAZD-562: Governorship of Dalmatia. The documents on Theatres,
- Several archival Funds of Class J–Religious Institutions,
- Several archival Funds of Class K–family and personal funds,[4]
- Periodicals of the State Archives Library in Zadar.[5]

The Collection of Music Materials (HR-DAZD-379) is the most significant and largest archival unit containing music materials which were handed over to the State Archive in Zadar in 1947 by the Zadar Music School. It contains 502 pieces of various note texts, divided into seven different groups:

1. "The music materials of the Zadar Philharmonic Orchestra",
2. "Giometto Giometti", conductor and composer of the Zadar Philharmonic Orchestra,

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[4] They contain invitations, contracts, notices, tickets, meetings, and note records.
[5] In which we can find concert criticisms, announcements of concerts and opera seasons.

3. "Rara–Zadar", comprises works which, according to the evaluation of musicologist Ennio Stipčević, are of "special archival and cultural historical significance",[6]
4. "Musical materials possessed by Zadar residents", comprises works by Zadar and foreign composers owned by Zadar residents, that is, musicians who, like Antonio Ravasio, worked in Zadar for a number of years,
5. "Società Corale Cittadina–Zara", consists of works by Italian authors from the 19th and the early 20th century,
6. "The Croatian Singing Society Petar Zoranić", the smallest in volume and contains several units of mostly Slavic authors,
7. "The Serbian Singing Society Branko", contains scores of mostly Slavic authors.

The Collection of Print (HR-DAZD-386) has been accumulated over the years from various sources. It was created by collecting various advertisements, occasion events, obituaries, epigrams, and extracting duplicates from archive funds. This material came about in a timespan from the 15th to the 21st century. Looking through the prism of our topic, we are interested in advertising (marketing) materials which promote and lead us through a music event. They provide basic information about a music event (programme and posters), as well as extensive and critical excerpts of songs, performers, etc. (programme booklets).

The Miscellaneous Collection (HR-DAZD-377) of the State Archive Archives in Zadar, in modern terms, due to its great quantity, could be called a 'mega collection', partly because there is real need for it, and partly because of unprofessional procedure.[7] Despite the fact that there is an analytical list of archival units, and an index, the searchability of its content can hardly satisfy today's user. As someone who has consulted its listed items several times, I can confidently assert that the materials of the collection include data of music history, and as a special curiosity I can point out very old note records dated a long time ago, by musicologists, to the 15th and 16th century.[8] These are badly damaged records written on parchment, which were used by notaries public of Zadar to make covers for

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[6] Ennio Stipčević, "Izvještaj o sređivanju i katalogiziranju muzikalija Historijskog arhiva u Zadru," [Report on the Arranging and Cataloguing of Historical Archives in Zadar] *Arti Musices*, 17,1 (1986): 101-135.

[7] Some documents should be separated from the collection and enclosed into archival funds according to the principle of provenance.

[8] To date these records we consulted a musicologist, Hana Breko Kustura, from the Department of Croatian Music History of the Croatian Academy of Sciences and Arts.

the books of notarial records. It is interesting, that in the funds of notary publics of Zadar, there are still books (HR-DAZD-31) whose covers are made of musical notation records on parchment.

An important part of the story about the sources for the history of music in the Zadar State Archives is certainly the funds of the theatre **Teatro Verdi (**HR-DAZD-252**)** and the **Teatro Nobile (**HR-DAZD-515**)**. Although the materials predominantly contain documents relating to the theatres' functioning, the ownership and management structure, contracts, and construction work on the theatre buildings, sources for the history of music can also be found in the documents relating to the theatre programme.

The still insufficiently-explored sources for studying sacral and traditional singing in the holdings and collections of the State Archives of Zadar are found in the classification groups I.–Societies, Associations and Organisations, in the funds: **The Brotherhoods in Dalmatia** (HR-DAZD-335) and the **Folklore Ensemble of Zadar** (HR-DAZD-433) and J.–Religious Institutions in the **funds of four monasteries** whose materials were taken over by the Archive after the French administration ended. They are extremely valuable materials which are the basis of Croatian medieval historiography, and which, however, have not been sufficiently valued through musicological research.

Furthermore, the holding of **The Governorship of Dalmatia. Societies in Dalmatia** (HR-DAZD-543) contains the material created by the work of the Dalmatian Governorship. Researchers can quickly and easily access the data on statutes, contracts, and financial reports of various societies, which operated in Dalmatia during the 19th century. Of particular interest to us and our topic are the societies in the title itself, which contain a musical determinant, as well as cultural-educational societies.

Another example of the separation from a large holding of the Governorship is also the **Governorship of Dalmatia. The Documents on Theatres** (HR-DAZD-562**)** ensued from performing the supervisory function of the state over the work and repertoire of private theatres in Dalmatia, Zadar, Šibenik, Hvar, Dubrovnik and Split.

At the end of this overview of the holdings of the State Archives of Zadar, it should be emphasised that the other funds of classification A.–Administration contain sources for the history of music. Information about music events and performances, authors, and performers is comprised in specific groups of materials created by performing the functions and

authority of particular administration institutions, such as the function of censorship and police surveillance of public order and morality.[9]

The information about the holdings provided in this short presentation is available to users on the website of the State Archives of Zadar, and in the conventional edition of the *Guide to the State Archives of Zadar*, which, compared to the recent past, can be assessed as a very high visibility.[10] The visibility of these contents will be improved when each of these holdings has an adequate and accessible network information aid, which is quite likely in the near future. What would be the culmination of the activities aimed at the visibility and availability of the materials in the holdings and collections of the State Archives in Zadar is the creation of a thematic guide

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[9] In the alphabetical index of the archival holding of the General Governors (*Rectors*) of Dalmatia (HR-DAZD-1) which contains the materials created by the work of the highest governing body during the Venetian rule in Dalmatia, we find the determinants–*Teatri* (theatres) and *Spettacoli pubblici*, which lead us to the documents about these contents. We still do not have data about similar contents in the Government holding of Dalmatia or any other lower institution from the time of the first Austrian administration. In the archival holding of the General Governorship, which was at the head of the French administration in Dalmatia, it is necessary to search through the groups with the following labels of the classification system (*Titolario*): Title VII: Public Education (*Pubblica istruzione*), rubric-12 Revisions of Theatrical Performances (*Revisione delle rappresentazioni teatrali*), 15 Feasts and Public Performances (*Feste e spettacoli publici*). Title XVII: Police (*Polizia*), rubric 13 Theatre Police (*Polizia de' teatri*) and 16 Festivals and Public Performances (*Feste e spettacoli pubblici*). There follows a large holding of the Government/ Governorship of Dalmatia (HR-DAZD-88) which contains two sub-holdings: materials of the Office of Presidency and those of the Department of the Government/Governorship. In the materials of the Office of the Presidency for the period from 1822 to 1834, the needed content may be expected under the classification label I-Police records. In the period from 1835 to 1908, it is necessary to search for groups under the label XI/2 Authorized Works, XI/2-4 Prohibited works, XI/2-7 Censoring works, XII/6 Travelling Companies.

In the Departmental documents of the Government/Governorship, we can expect to find the required contents in the documents of the classification label III/I 1-Public Safety-Theatres, dances, societies and other public events, travelling musicians. The search logic is also the same towards the classification system applicable in the Governorship from 1909 to the end of its activity. Group N237 Theatre Policing, N238 Public Performances and other productions are searched through. Very intriguing is the label N239-Playing the little organs. As the last such example we mention the classification label from the holding of the Municipality of Zadar from the time of the Italian administration (HR-DAZD-121)-XV 3 Public Safety–Theatre and Public events.

[10] *Guide to the State Archives of Zadar*, accessed April 2 2018, http://www.dazd..hr.

of the sources of music history, and eventually the availability of digitized documents on the website. It is thought that the latter cannot possibly happen soon, because a large amount of archival material is awaiting processing. Meanwhile, we have a brilliant current example of the illumination of this part of the Croatian archive treasure through an exhibition prepared through the co-operation of an archivist from the State Archives of Zadar, and a musicologist from the Department of Ethnology and Anthropology of the University of Zadar, under the title *The 19th Century Music Life in Zadar*. The author of the exhibition and catalogue text is the musicologist Katica Burić Ćenan, who has been engaged in researching the musical past of Zadar for two decades. The concept and exhibition catalogue were arranged by long-time archivist Denis Martinović.[11]

Società Filarmonica

For nearly half a century (from 1858 to the early 20th century), the most significant role in the music life of Zadar was played by the *Società Filarmonica* (Zadar Philharmonic Society). The story of this society is told today by various archive documents gathered in several collections within the State Archive of Zadar. These are, first of all, the collections of musical material and the Collection of the Society, but also family funds, newspapers, manuscripts, and particularly periodicals. This is not surprising, since the Philharmonic Orchestra was extremely active, and through almost a century of work, it produced over five hundred musicians. Even though there is a lot of documentation, we should be aware that most of the material was lost in the disastrous bombardment of Zadar in 1945, along with the archives of the Cathedral, theatre, the Zoranić Society, etc.

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[11] Several other DAZD employees participated in the preparation and installation of the exhibition: Jurica Badžoka, Martina Ljutić, Marcela Ostojić, Marija Kero and Edi Modrinić.

Thus, the oldest Zadar music society was founded in 1858,[12] and, save for the interruption caused by the First World War, it operated until 1948.[13] Like many philharmonic societies in the second half of the 19th century on Croatian soil (Split, Pula, Pazin, etc.) and in many regions of the Austro-Hungarian Monarchy (Ljubljana, Poznan, etc.) the Philharmonic Orchestra of Zadar would also play the major role in the development of musical life in this city.[14] With the management made up of Zadar intellectuals who were very familiar with European cultural and artistic pursuits, in only a few months, the Philharmonic Orchestra engaged professional musicians and experienced, long-standing amateur musicians, enrolled dozens of music trainees, established a music school, and formed an orchestra and a choir. They were given financial, as well as material, assistance by the prominent powerful people in Zadar, such as the Luxardo family, the printing house of Elena Demarchi-Rougier, the then Zadar Archbishop Josip Godeassi, and the already renowned composer Franz von Suppé, who regularly sent them his scores (Figure 9-1).[15]

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[12] For the sake of comparison, significant changes took place in Zagreb in 1851 in its biggest music society so called "Musikverein". Namely a specially selected committee, (Vatroslav Lisinski, Albert Štriga, Petar Preradović, Mijo Krešić) drafted a proposal of the new *Book of Rules*. It emphasised the aspiration "that music art should generally be spread and developed throughout the homeland and love for this art should be aroused with special regard to the significance of Yugoslav music." See: Antun Goglia, *Hrvatski glazbeni zavod 1897-1927*. (Zagreb: Reprinted from St. Cecilia 1927), 16. See also: Jerko Bezić, "Nosioci zadarskog muzičkog života u odnosu na narodni preporod u Dalmaciji," ["Carriers of Zadar musical life in relation to the national revival in Dalmatia"] *Radovi Intituta Jugoslavenske akademije znanosti i umjetnosti u Zadru*, 8 (1961): 296. Unlike Zagreb, in another centre of the Austrian government headquarters–Ljubljana, already in the mid-19th century there had been a Philharmonic Society, which was German-oriented. For this reason, the Ljubljana National Reading Room founded a choir in 1861, which performed mostly Slovenian, Croatian and Czech songs. See: Bezić, "Nosioci zadarskog…", 297. In Pazin, the so-called *Societa' filarmonica di Pisino*, was founded in 1893 so that it would restore the "band", i.e., the brass band and orchestra. According to the author Giovanni D'Allesio the first *Societa' filarmonica di Pisino* was established in 1859 with the aim "di difendere l'italianita' degli abitanti" [to defend the Italian nationality of the inhabitants]. The documentation of the Philharmonic Society is kept today in the State Archive of Zadar., HR-DAZD-386, box 3, 543
[13] The author of this part of the paper has so far investigated the effects of this Society (the Philharmonic Society) from 1858 to the First World War.
[14] *Societa filarmonico-drammatica* was founded in Rijeka in 1873. See: Lovorka Ruck, "Glazbeni život u Rijeci," [Music Life in Rijeka], *Arti Musices*, 35/2 (2004): 180.
[15] Already in the first year of the Society's activity, Suppé sent from Vienna seven choir scores dedicated to the Philharmonic Society! Today all seven scores are kept

Figure 9-1. F. von Suppé: A transcript of Allegri's *Miserere* for the choir of the Philharmonic Society (Vienna, 1860, autograf)[16]

Thanks to the aid of the distinguished people of Zadar (G. Lantana,[17] B. dr Cosimo, E. Petriccioli, Antonia Cigala,[18] etc.), as well as its successful business operations, the Society invested resources in equipping their premises, and purchasing instruments and musical material. In the beginning, the assembly-rooms were at the Teatro Nobile, but by establishing the new theatre, Teatro Verdi, the Society moved to the premises there. At the end of 1862, the Philharmonic Society was already being praised in all local newspapers as the best organised society in the city.[19] Surprisingly, up until the 1880s, the Society, which was primarily Italian-oriented, did not interfere with political developments; rather, it was a promoter of cultural diversity and respect.[20]

Apart from a few professionals, the Philharmonic Orchestra was made up of amateur musicians, so-called dilettantes[21] (who were the main performing force), and young trainees.[22] The society paid full attention to

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[17]Josip Lantana was especially responsible for the growth of the Philharmonic society. The 1863 annual report mentions that Lantana donated 18 complete Rossini's operas to the Society. Most of the reputable Zadar residents donated vocal and instrumental scores. See: *Relazione della Direzione della Società Filarmonica di Zara: sull'andamento sulla gestione econimica della Societa stessa. Zara:Tip. Demarchi Rougier, 1859., 1860., 1861., 1862., 1863.*

[18] The composer Giovanni Cigala's widow (from the first half of the 19th century).

[19] See: *Il Nazionale/Narodni list*, 14 (1862).

[20] From 1885 on, the political situation in the city worsened, and the Philharmonic society would be found at the 'heart' of a scandal. Namely, that the elections and the victory of the leader of Zadar autonomists Luiggi Lappena, The Philharmonic Society under the leadership of Nikola Strmić sent their congratulations published in the *Narodni list* (*Il Nazionale*) newspaper, which insulted many Croatian supporters and members of the Society. The disruption that occurred due to the political situation also caused an interruption in the cooperation between the Philharmonic and the Croatian societies.

[21]Dilettantes were, according to the Statute of the Philharmonic Society, musicians "who perform music by themselves and intend to continue doing it." They were obliged to pay the Society a monthly membership fee, and in return, they were allowed to access the Society's premises and permitted free use of instruments and notes which belonged to the Society. For some dilettantes, the management of the Society could decide to suspend membership fees. The statutes of the *Società Filarmonica* are located mainly in the context of the legacy of the Zadar Philharmonic (HR-DAZD, Governorship for Dalmatia, Societies in Dalmatia, 543, box 3), but there are also statutes within many other collections. See also: HR-DAZD-377: Miscellaneous; Archival Funds of Class K -personal Funds, and HR-DAZD-386: Press.

[22] Already, after several months of activity, 96 trainees were enrolled. By the end of the first year of activity (1859), the Society included a total of 317 members, 77 of

the trainees, and sent them abroad for further training, most often to Milan and Padua.[23] Such is the example of the brothers Antonio (baritone)[24] and Giovanni (tenor) Pini-Corsi,[25] who, after receiving their first training at the Philharmonic Orchestra, and later completing singing studies in Milan, made enviable careers. They both collaborated with the famous Toscanini, met Giuseppe Verdi, sang opera premieres, and made some of the world's first audio recordings! Similar success was also achieved by Petar Strmić, son of Nikola Strmić, who, along with the piano, also graduated in conducting, and was the main conductor of Warsaw, Vienna and Moscow Operas. All of them returned to Zadar on a regular basis, most often at Christmas, and performed with the Philharmonic Orchestra. Apart from

whom were dilettantes, which was certainly favoured by the policy of the Society which enabled families with lower income to attend music lessons. See: *Rellazzione*, 1859, 1860, 1861. The 1859 report of the Society's activities was also published by the newspaper *La Voce Dalmatica*, 9 (1860).

[23] Giuseppe Sabalich, *Cronistoria aneddotica del Nobile teatro di Zara (1781-1881)* (Rijeka; Zadar, 1904-1922) Also see: Elisabeth Forber, "Pini-Corsi, Antonio," in: *The New Grove Dictionary of Opera*, vol. 3 (Oxford: Oxford University Press 2004), 1015. See also:
https://en.wikipedia.org/wiki/Antonio_Pini-Corsi, accessed April 2 2018.

[24] **Antonio Pini-Corsi** (Zadar 1858- Milano 1918) was one of the rare Zadar professional singers. This baritone from Zadar became famous in Italy, and later on international stages as well. He appeared in numerous operatic premieres, and some of his roles, such as Verdi's Ford (*Falstaff*) and Puccini's Schaunard (*La Bohème*), remain in memory. Pini-Corsi was part of the first generation of recorded musicians, and is considered to be one of the finest *buffo* singers of all time. See: Antonio Pini-Corsi. *La forza del destino*. "Poffare il mondo", accessed April 2 2018,
https://www.youtube.com/watch?v=WSCw4bUpeKg. In Zadar's State Archives there is a stornello ""*Tu non mi vuoi piu ben*" (*You don't like me anymore*), which is attributed to Antonio Pini-Corsi, The song was written for a baritone and the piano. HR-DAZD: Music materials, box 69., IV/495. Manuscript score. There is also a record recorded by the famous Caruso. See:
https://www.youtube.com/watch?v=OLKkElKmswY, accessed April 2 2018.

[25] Antonio's brother, **Gaetano Pini-Corsi** (Zadar 1863-?) was also an accomplished tenor singer. His significant achievements were under Toscanini's conducting, when he sang David in *Masters Singers* at the opening of the 1898/1899 season, and Dr Crains in *Falstaff*. Just like his brother Antonio, Gaetano also made audio recordings of his performances. One of the most important was the first audio recording of Leoncavallo's *Pagliacci*, which occurred in 1907 for the Gramophone publishing house, when Gaetano sang Beppe with the ensemble of La Scala conducted by Carlo Sabajn. See: "Gaetano Pini-Corsi: Leoncavallo: *I pagliacci* ('*O Colombina…*')", accessed April 2 2018,
https://www.youtube.com/watch?v=GcKJJQh5Ca8

them, two music professionals who featured in almost every concert in Zadar, and, with their engagement, influenced the overall music life of the city, were their fellow students; Antonio Ravasio of Italy, and Nikola Strmić of Zadar. They both worked at the Orchestra from its first days. Ravasio[26] was the main piano and singing teacher, and the conductor of the Orchestra for almost fifty years, during which time he composed, and was engaged in the Zadar cathedral. Strmić, as a composer, violinist and organiser, was certainly the central figure of the second half of the 19th century in Zadar (Figure 9-2).[27]

According to contemporary music historiography, Strmić, together with Zajc, was the best educated musician of the time.[28] He is the author of numerous operas, concerts, and symphonies, most of which, unfortunately, exist today only as references in the literature. Besides Ravasio and Strmić, an instrumentalist who should also be mentioned is Alessandro Dionisi,[29]

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[26] **Antonio Ravasio** (Bergamo 1835, Zadar 1912), was a distinguished conductor, pianist, *maestro di cappella* in the Cathedral, conductor of the choir, music pedagogue, and the organiser of music life in Zadar. He worked within the music society *Societa Filarmonica*, but also as the conductor of the cathedral *cappela*. In addition to his valuable pedagogical work at the Philharmonic Orchestra, and acting as the leader of the orchestra, Ravasio also conducted operatic performances at the old theatre, Teatro Nobile, and later (from 1866) at the Teatro Nuovo. See: Carlo Ballarin, "Antonio Ravasio. Maestro di cappella della Basilica Metropolitana di Zara," *Il Dalmato*, XXXII,68 (1897).

[27] **Nikola Strmić** (Nicolò de Stermich, 1839-1896) was the most famous Zadar musician. Besides being an accomplished violinist, he was also a respected composer, whose works were performed in Zagreb and in Italy. He composed operas, piano and violin pieces, chamber, orchestral, and choir music, as well as solo songs. Among the most famous of his works is his opera *La madre slava*, which represented a kind of opera hit of that time, even beyond Croatia, then the orchestral movement *Nei giorni campestris*, and his first violin sonata, *Suonata per Violino con accompagnamento di Pianoforte* op. 24. See: Zdravko Blažeković, "Prilog poznavanju Nikole Strmića," [A Contribution to the Knowledge of Nikola Strmić] *Rad JAZU*, 409 (1988): 285-313.

[28] Katnich?, *Niccolò Cav. de Strmić di Valcrociata per molti estimatori* (Zara: Tipografia del Nazionale, 1876). Rudi Belić, "Književnost i umjetnost u Dalmaciji zadnjih pedeset godina," [Literature and Art in Dalmatia for the last fifty years] *Jubilarni broj Narodnog lista*, (1912): 92.

[29] **Alessandro Dionisi** (Verona 1821-Zadar 1896) was an Italian musician, who arrived in Zadar as a twenty-year-old. Although he was not a professional musician, but a so-called *dilletante*, he was the first violinist and concert master at the theatre Teatro Nobile. From the very beginning of the Philharmonic Orchestra, Dionisi was an active violinist in the Orchestra, and an occasional conductor, as well as a violin teacher. Along with his great commitment to his students, Dionisi continued to

Figure 9-2. Nikola Strmić (Stermich)[30]

an amateur violin player, who, along with Ravasio, was a long-standing violin teacher, and was also engaged in the theatres. Among the young musicians, several of them, such as Carlotta Bianchi,[31] Adelina de

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perform in concerts, so from 1876 until 1881, he appeared in the famous Quartet: Nikola Strmić, violin, Alessandro Dionisi, violin, Giuseppe Eberle, viola and Giuseppe Höberth, cello. See: Sabalich, *Cronistoria*…, 307-308. See also: *Smotra dalmatinska*, 100 (1896); HR DAZD: Press, box 48, sign. 10.

[30] Sabalich, *Cronistoria...,* 291.

[31] **Carlotta Bianchi**, along with Adela Strmić, was certainly one of the most significant singers of Zadar. One of her most prominent performances was the solo piece in the opera *Traviata* by G. Verdi, which the Philharmonic orchestra performed independently at the old theatre, Teatro Nobile, in1865. *La Voce Dalmatica*, 1 (1861). See also: Sabalich, *Cronistoria...*, 287.

Stermich,[32] Anna Quien,[33] Šime Strmić,[34] Miho Milković,[35] Antonio Gossetti,[36] and Riccardo Fabbrovich, excelled.[37] Several female musicians, like the pianist Luigie (Luise) Schreiber and Pia Boschi, flashed like real stars, but after a few years, their names were no longer mentioned in the local newspapers.

From the very beginning,[38] until the First World War, the Society regularly staged five to eight concerts a year, which normally filled the

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[32] **Adela (Adelaide) Strmić** born Putti, though a *dilletante*, marked the middle and the second half of the 19th century by having been long engaged in music. Already in 1850, Adela was among the soloists of the theatre choir at the Teatro Nobile, and upon the foundation of the Philharmonic society, she continued her musical career. She married Francesco Strmić (brother of Nikola Strmić), and after 1876, her name no longer appeared in music reviews of the Philharmonic Orchestra concerts. Sabalich, *Cronistoria…*, 289. See also: *Osservatore Dalmato*, 49 (1850): 4.

[33] **Anna Quien**, a young singer, who most probably had her first appearance at the New Year's concert in December 1861, where she sang a *barkarola* in a duet with the experienced baritone Šime Strmić. As a soloist she sang for fifteen years (until 1877). See: Sabalich, *Cronistoria…*, 290.

[34] **Baritone Šime Strmić** (Simeone de Stermich) (1825-1893) was the elder brother of the conductor and violinist Nikola Strmić. Although an amateur in music, he was an active soloist and member of the Philharmonic Society, as well as a board member of several societies: Philharmonic Society, Teatro Verdi and the National Reading Room. See: Sabalich, *Cronistoria…*, 293. See also: *Narodni list*, 3 (1893).

[35] **Miho Milković** (Michele Milcovich, Kotor 1823-Zadar 1878) was a distinguished music amateur, (bass, baritone) and a well-known physician by profession in Zadar, later the headmaster of the Midwife School, and the Provincial Health Officer of Dalmatia. See: Sabalich, *Cronistoria…*, 243-244. See also: Bezić, Nosioci zadarskog…, 299; Miloš Škarica, "Zadarski liječnici," [Zadar doctors] *Radovi Instituta JAZU u Zadru*, II (1955): 156.

[36] **Antonio Gossetti** (?-1908.) was certainly one of the most significant singers of the Philharminic society. He studied music in Padua, but it is not certain whether Gossetti ever completed his music studies. When he returned from Italy, he continued having singing instructions from Ravasio. Though a *dilletante*, Gossetti marked the beginning of the Society's activity, and his importance and reputation was confirmed by the concert held in December 1897, organised in his honour. See: *Narodni list,* 3 (1881). See also: Sabalich, *Cronistoria…*, 290.

[37] Baritone Riccardo Fabbrovich had his first singing training from Giovanni Cigala, a long time musician in the Zadar Cathedral and Teatro Nobile. He was active in the Zadar Philharmonic from its very foundation, and already in the first annual reports, his name was mentioned as one of the soloists. See: Sabalich, *Cronistoria…*, 262.

[38] On April 7 1857, the founders of the Society sent the Governor a request for the establishment, with a manuscript sample of the Statute enclosed. The request says: "*There has been an idea in this city to expand the love, culture and taste for music and to achieve this only aim*" (*É sorta in alcuni la plausibile idea di diffondere*

musical life of the city, Apart from these regular concerts, during the pauses between opera seasons, the members of the Philharmonic were involved in other musical events in the city: they played in the theatre orchestra,[39] sang in the Cathedral choir, accepted invitations to perform in concerts organised by the National Reading Room, Matica dalmatinska,[40] Military or City Music, participated in fun dances, and enhanced various city events.[41] The programme of Philharmonic concerts consisted mostly of fragments from famous 19th century operas. This is not surprising, because the Zadar audience had its opera theatre as early as the late 18th century. Even then, the most famous arias and duets from the then current opera composers, Domenico Cimarosa, Giovanni Paisello, and Giuseppe Sarti[42] could be heard. In the middle of the 19th century, Zadar resumed the Italian and European trends, primarily Gioachino Rossini, Gaetano Donizzeti, Vincenzo Bellini, and a little later, also German composers Giacomo Mayerbeer, Carl Maria von Weber, and Richard Wagner, as well as the French, Charles Gounod, and Jules Massenet. At the end of the 19th century, Zadar had the opportunity to hear the fragments of some more modern European opera composers: Georges Bizet, Giacomo Puccini, and Pietro Mascagni. By making the Philharmonic music school stronger, that is, by increasing the number and quality of instrumentalists, there came to the popularisation of instrumental or orchestral and chamber music. Their programme was broadened with the works of Ludwig von Beethoven, Felix Mendelssohn, and Edvard Grieg, as well as those of typical Romantics like Frederic Chopin, Robert Schumann, Franz Schubert, and Johannes Brahms. Apart from Beethoven, the works of Wolfgang A. Mozart or Joseph Haydn could be heard only occasionally, and the music of earlier periods (Baroque, Renaissance) was represented on only a few occasions. The programme of the Philharmonic, especially from the 1860s to the 1880s, often included the

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sempre più in questa citta l'amore, la coltura ed il giusto pella musica, ed avvisarono quale unico mezzo di cogliere questo scopo gentile, l'istituzione d'una Societa Filarmonica). HR-DAZD-543, box 3. The Society was officially approved on June 7 1858. See: Bezić, "Nosioci zadarskog…", 296. See also: Vjekoslav Maštrović, "Hrvatska društva u Zadru (1848-1920)," in: *Zadar-Zbornik*, book II., ed. by Jakša Ravlić (Zadar: Matica Hrvatska, 1964), 484.

[39] In the old theatre Teatro Nobile and later in the new Teatro Verdi.

[40] Matica Dalmatian, a literary society founded in 1862 in Zadar.

[41] E.g., marking individual holidays and anniversaries such as the Emperor Ferdinand I's birthday on August 18 farewell to the old year and welcome the new year, occasional charity events, etc.

[42] See: Katica Burić, *Glazbeni život Zadra u 18. i prvoj polovici 19. stoljeća* [The musical life of Zadar in the 18th and first half of the 19th century] (Zadar: Sveučilište u Zadru, 2010), 123-150.

works of Zadar composers as well, first of all those of Nikola Strmić and Giovanni Salghetti Drioli.[43] In their programme, they also included the works of Franz von Suppé.

After the declaration of the First World War, the Society, as well as the other societies in the city, got involved in organising charity events. Tickets for some concerts were free of charge, and presents were brought for the soldiers on the battlefield. In 1915, Italy entered the war. The authorities in Zadar dissolved the Italian societies, so that the Philharmonic stopped their activity.[44] The Society was re-activated only in 1918, when the occasion for the solemn ceremony was the establishment of Italian authority.

Looking forward

Only when the present becomes the past and the future becomes the present can we discern which is which.[45]

So said Richard Taruskin, American musicologist and music historian, referring to the destiny of (musical history) sources, which, when dust and archival peace is removed, pretend to become a part of contemporaneity, transforming historical facts into their aesthetical counterparts (transhistoric), adapted to the rules of 'live music' and to the system of

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[43] Giovanni Salghetti Drioli (Zadar, 1814-1868) was a versatile artist, composer, music critic, piano player and organiser of music life in Zadar. He was one of the first music critics in Croatia, whose judgements were held as competent criteria. His musical creation largely belonged to salon music but there were also more valuable results. See: Katica Burić, *Glazbeni život Zadra…* 90-91. See also: Sabalich, *Cronistoria…*, 251. The author Pereti points out that Salghetti-Drioli was certainly the most significant and popular composer in Dalmatia and that his works, primarily vocal romances, were performed throughout Dalmatia, but also in Italy (Trieste, Venice), as well as in America. Pauer Peretti, "La vita musicale della Dalmazia," *La Rivista Dalmatica*, (1942): 17-18. Salghetti-Drioli is the author of several successful songs (for solo and duet) accompanied by the piano, choir and church songs. Among the most prominent was the monumental work for the choir and the orchestra *Le Memorie* with the lyrics written by Nicolo Tommaseo, and the song *La Simpatia* for soprano and tenor accompanied by the piano, which was sung by the soloists of the Philharmonic Society at a concert held in May 1860.
[44] Julije Grabovac, "Narodne čitaonice," in: *Hrvatski narodni preporod u Dalmaciji i Istri*, ed. by Jakša Ravlić. (Zagreb: Matica Hrvatska, 1969), 202.
[45] Richard Taruskin, „The Pastness of the Present and the Presence of the Past," in: *Authenticity and Early Music,* ed. by Nicholas Kenyon. (Oxford-London: Oxford University Press, 1988.), 137-207.

existing and living canons.[46] In that complexity of dynamic changes and enquiries about all dimensions of the existence of archival material through the past, the present, and the future, there is the charm of musical research that attempts to revive and re-evaluate the 'traces' of the past, provide them with a place in the present, and offer incentives to upgrade in the future. One of these studies will be presented as a view forward, as an example of our questioning about the existence of the material through time, throwing light onto the path from dust to life, or, as Gligo puts it, 'removing dust'[47] from archival (music) traces. This refers to a four-year research project of the Croatian Science Foundation, entitled "Musical sources in Dalmatia in the context of the Central-European and Mediterranean musical culture from the 18th to the 20th century". The project started in March 2017, and aimed to discover new information about Croatian musical heritage, but also its European counterpart preserved in Croatia, as a support for the evidence about centuries-old continuity of musical culture in the region, and about the connection of Croatian musical sources to middle-European and Mediterranean musical and cultural circles.

The versatility of the music culture of the wider Dalmatian area is a reflection of many centuries of well-groomed and widely influenced folk, church, and artistic, playing of music. In order to clearly identify this complexity, it is necessary–besides recording and examining the spoken and live musical tradition–to collect and interpret the material musical heritage stored in churches, monasteries, and private or archival cultural institutions across the coast, which contain a large number of musical manuscripts and prints, as well as books about music, to date completely unexplored and unknown to the public. The focus of the research will also concentrate on the representation of domestic productive and reproductive forces as well as those foreign forces, which, temporarily or permanently, have realised in this region their creative potentials as music teachers, theoreticians of music, composers and musician interpreters. At the initial stages of the project, the work on arranging, digitalising and cataloguing archival music collections (in Split, Hvar, Zadar and Dubrovnik) is foreseen, followed by work on their analysis, interpretation and contextualization, so as to enable the (re)construction of the (history) music culture and determining its role in creating the local, regional, national, and transnational cultural identity. The research will be continued through the process of converting data into the Central European and World Music Database (Répertoire International des Sources Musicale, RISM, Frankfurt/M, Germany), as well as

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[46] Nikša Gligo, "Divota arhivske prašine," in: *Glazba i baština,* ed. Ennio Stipčević. (Šibenik: Gradska knjižnica "Juraj Šižgorić", 2002), 11-28.
[47] Gligo, "Divota arhivske prašine," 13.

incorporating the domestic and foreign repertoire of some valuable works of Croatian authors from the period of classicism to modernism in music, inaccessible to the present day. Within a broadly set project plan, research questions are set as to how archival sources help/condition/enable the interpretation of the musical past, to what extent music was a part of cultural everyday life, what the influence of music on society and vice versa was, what the relationship between politics and music was, to what extent the music life of Dalmatian cities followed the contemporary events of the rest of Croatia and Europe, how the cultural influences in the Mediterranean and Central Europe were interwoven with local features and individual endeavours, and to what extent musicians (and audiences) were aware of European music trends in terms of creativity, reproduction and aesthetics.

The answers to all these questions formulated within the general, unique goal, through the knowledge of new artefacts and revitalisation of the neglected, but highly deserving musicians for the history of artistic music in Dalmatia, are reflected in separating individual goals with implications for a specific methodological framework which, in its scheme, encompasses the strategy of case study. This is a design of four 'cases' (Split, Hvar, Zadar, Dubrovnik) and the specified units of analysis for each research area.

In Split, the research objective will be focused on a comprehensive presentation of the correspondence of Julije Bajamonti (1744-1888), Split's polyhistorian, doctor, and composer, where we expect to see a series of new details about the life and creativity of this most important enlightener, not only in Dalmatian, but also in the entire Croatian history. Most of the research will include materials preserved in the Bajamonti Heritage Archives at the Archaeological Museum in Split (AMS) and in the Archives of the Kavanjin-Capogrosso family in the Museum of the City of Split (MGS). The Archive of the AMS stores a collection of regesta and concepts in a number of volumes on a total of 227 A4 size pages, covering the period from April 1771 to October 1800 (a total of 1244 concepts).[48] The

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[48] The correspondence stored in the AMS is divided into two groups: group A (Julije Bajamonti's Archive in AMS, sign. XII/A, *Correspondence Concepts*) contains the concepts of letters sent by Bajamonti to the others, while group B (Julije Bajamonti's Archive in AMS, sign. XII/B) includes letters from others to Bajamonti. Correspondence from group B is partially arranged and classified and carries the signature XII/B with an additional number of folders in which the letters are stored from individual subgroups (for example, correspondence Fortis-Bajamonti with sign. XII/B-48, correspondence Miho Sorkočević-Bajamonti with sign. XII/B-111-1, XII/B-111-2, etc.). There is, however, a considerable problem with the part of it which Bajamonti used for his own debates and notes, so the letters of some people to Bajamonti remained disordered and scattered across various chapters of his

alphabetical index of Bajamonti's concepts distinguishes 250 persons; local and foreign scholars, writers, artists, and public personalities, with whom Bajamonti, occasionally or frequently, corresponded.[49] The analysis of Bajamonti's correspondence with Jakov (Giacomo) Storti, a Venetian publisher and bookseller from whom he continually ordered books, discussions, treatises, and essays, which he then studied and critically remarked upon in his works, should provide answers to questions about the conditions of procuring valuable classical music literature in Croatian regions on the Adriatic. It is difficult to estimate how strong the centripetal force, with which Venice, Padua, Rome and Naples tinged music activities outside the centre, both in Italy and in Dalmatia, was. But it is more than certain that the encounters, permeation, and transformation of cultural traditions of the eastern and western Adriatic coasts happened directly, by direct transmission of tradition and influence, from teachers to students, and indirectly, through the exchange of note material and repertoire, and music books. Such acquisitions have found new implementations, and have become models, transplanted and imitated in the new environment (as is especially noticeable and transparent in the example of Bajamonti's work), and the aspect of the so-called 'cultural transfers' will be among the issues within the project programme.

The research on the island of Hvar will be based on cataloguing and analysing archive documentation, manuscripts, and printed music, stored in the archives of the island's towns, in Hvar (Cathedral Archives and the Hvar Heritage Museum) and in Stari Grad (the Archives of the Dominican Monastery). The first phase of the project will include digitalisation of a valuable and very extensive music collection (of about 421 archive units) of the Dominican Monastery Archives, which covers the works of local composers, but also the prominent European composers. The collection

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legacy. In order to complete the list of preserved letters, it is necessary to paginate the entire material and compare it with the existing studies. In that way, we will be able to reveal which letters actually exist and whether there are any differences in relation to the existing efforts in cataloguing the archives.

[49] Among others, we will mention the musicians Josip Raffaelli, Angelo Maria Frezza, Giovanni Grazioli, Luka and Antun Sorkočević, then the famous Dubrovnik citizens like Miho Sorkočević, Deša Gozze Gučetić, Junije Resti and Toma Basiljević, Italian travel writer Alberto Fortis, learned Hvar bishop Ivan Dominic Stratico, the Trogir writers Ivan Luka Garanjin and Radoš Michieli-Vitturi, the French literate Joseph de Lalande, the Viennese librarian Michael Denis, a professor of astronomy at the Padua University, Giuseppe (Josip) Toaldo, a Split doctor with a Venetian address Leone (Lav) Urbani, governor-generals of Dalmatia Paolo Emilio Canal and Angelo Diedo, Venetian printer and publisher Giacomo (Jakov) Storti, etc.

requires a particular scientific interest in the process of reconstruction of artistic church music performing on the island of Hvar, an aspect that is somewhat neglected in the contemporary understanding of the music culture of the island of Hvar, especially in relation to the phenomena of traditional music and folk singing, which are most commonly referred to by their musical identity. It will be followed by the production of thematic collection catalogues, supplemented with photographs of musical incipits from analysed units and made publicly available to all interested users. In the second phase, we will deal with the valuable individual legacies of Josip Raffaelli (1767-1883) and Ambroz Novak (1899-1947), preserved as manuscripts in the Cathedral archive, and in the Archives of the Museum of Hvar Heritage. In terms of fieldwork, the research in foreign archives will focus on examining the ten-year period of Raffaelli's stay in Italy (1792-1801?) by studying music sources in Padua and in nearby Este, where Raffaelli trained in music education, and began his professional music career, as an orchestra conductor and, probably, a composer. The legacy of Ambrose Novak includes about thirty manuscripts and sketches, mostly compositions for the voice and piano, chamber pieces, correspondence, and dozens of music reviews, reports and articles, and concert programs that Novak visited or participated in, as a performer and a composer. The aforementioned material is planned to be supplemented with insights into the sources outside of Hvar (primarily Split and Zadar, where he also lived) and to explain and evaluate Novak's composing, music-publicist and performing activities within the cultural and socio-historical context. Finally, as the closing stage, we expect to present a certain number of Raffaelli's and Novak's manuscripts in contemporary notation and audio recording, as part of the critical and discographic editions.

The research of Dubrovnik's musical heritage will include the reconstruction of biographies and the revealing of new findings about domestic and foreign musicians who contributed significantly to the development of the musical life of Dubrovnik from the 18th to the 20th century (Tommaso Resti, Giuseppe Valenti, Angelo Maria Frezza, Domenico Antonietti, Giorgio Kraglich, and Giuseppe Zabolio). By digitalising the material (in the Dubrovnik State Archives and Archives of the Franciscan Monastery of the Friars Minor), and by doing the musical and other analyses, and transcribing unknown and unpublished works, the researchers will try to estimate and evaluate the level of music culture of Dubrovnik in the context of Croatian and European music of classicism. A special research stage will be a detailed account of preserved manuals and textbooks for musical theory and practice of performing skills, such as Francesco Gasparini's hand-book for playing the harpsichord, *L`armonico*

pratico al cimbalo (Bologna, 1722), used also by Italian composer
Tommaso Resti, whose biography and the composing opus (49 units) will
also be analysed from the musicological perspective.[50]

The research in Zadar will cover systematising and analysing archival
material stored in the State Archives of Zadar, and in the Archives of the
Zadar Cathedral of St. Stošija, which will allow for new interpretations of
the rich secular and ecclesiastical musical past of Zadar. On these grounds,
the repertoire and the work of the Zadar opera theatre (Teatro Verdi) will be
explored, as well as the life and work of the most prominent musicians
(composer and violinist Nikola Strmić, conductor and composer Antonio
Ravasio, composer and music critic Giovanni Salghetti-Driolli, world-
famous singer Antonio Pini-Corsi and his brother Gaetano, conductor and
pianist Petar Strmić). During the studies about Zadar's migrants', researches
of international archives and other cultural institutions will be organised,
and more systematic analysis of numerous writings in periodicals will reveal
other interesting themes, such as the development of musical criticism or
the role of women in the musical life of Zadar.

By digitalising, cataloguing, and analysing manuscripts and printed
music on selected sites in the given period, and presenting them further
through exhibitions, transcripts, concerts, audio recordings, and educational
programs, we will try to breathe 'new life' into the 'dusty' archive material.
By opening the path to modernity, we will also show a specific type of
historical responsibility (in a very *unhistorical time*) towards the preserved
artefacts that are supposed to 'live' in the repertoire, and become the
property of living and active music lovers, both in Croatia and abroad.

Conclusion

Archival material is more often than not the only proof of a community's
past. And the music history of Croatia, fortunately or unfortunately, draws
most of its evidence from such sources, so one of the goals of this paper is
to point to the importance of taking constant 'glances' into archival
documents. Although they are (more or less) unchangeable, and represent a

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[50] In the research, the focus will be another interesting musician from Dubrovnik–
the violinist Angelo Maria Frezza, who came from Zadar in 1786, to become the
town's violinist, at the place of Naples composer Domenico Antonietti. Until today
it was considered that Antonietti had probably died that year, because his name was
not found in the archive documents. However, current research in the Dubrovnik
State Archives has already brought about new discoveries of four diplomatic letters
from the 18th century (in the volume *Diplomata et acta*) that Antonietti had sent to
the Dubrovnik government from Naples in the period from 1785 to 1798.

kind of historical fact, their interpretation is subjective and often subject to different ideologies. In the 1950s, French documentarist Susanne Briet already talked about the cultural, historical and social forces, which influence the creation of information, i.e. their interpretation.[51] Despite her early observations, we are still witnessing very different interpretations of historical events even today, but also the fact that, for example, Croatian music historiography is only 'halfway down the road' when it comes to arranging, sorting and cataloguing the music archival material, as well as interpreting the past. Although this work may never be completed, it is our duty to constantly 'communicate' with archival material, but possibly with a greater sense of awareness on the interdependence of cultural-social and other influences on that matter.

   This chapter sought to include three levels of observation and interpretation of archival documents. The first two parts consider the materials within the State Archives of Zadar; the former talks about its real scope, location, visibility, and potential, while the second part through the prism of this material, i.e., by way of gleaning information from archival documents (music, concerts and opera posters, statutes, periodicals, etc.), tells the story of one of the – perhaps - most valuable pieces of Zadar's musical past–the Zadar Philharmonic Society. The third part of the paper is the latest scientific research project in cooperation with the Croatian Science Foundation and the Arts Academy in Split, which, apart from the mentioned archival material within the State Archive in Zadar, handles, interprets, and contextualises the material musical heritage stored in churches, monasteries, private or archives of cultural institutions and other Dalmatian centres (in Split, Dubrovnik, and Hvar). By discovering new findings about Dalmatian musical heritage, as well as the European heritage preserved in Croatia, the research will also underline the multi-ethnic (cultural) ambiance of the presented environments in which the intertwining and permeation of the various cultures shaped the musical life that was in line with many of the then European centres. New views, transcriptions, and interpretations, of musical artefacts should serve as a strong reference to practical musicians (by including 'decomposed' archival material in the domestic and foreign repertoire of some of the unknown and unavailable works of Croatian authors of the 18th, 19th and 20th century), but also future scholars of the history of artistic (church and secular) music in Croatia that will enhance their knowledge of its multi-century continuity and the involvement of Croatian sources in Central European and Mediterranean musical and cultural circles. In addition to pointing out the extent and significance of

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[51] See: Suzanne Briet, *What is Documentation?*.

preserved materials in Dalmatian archives, this chapter also highlights the need for the cooperation of different profiles of scientists. It seems that only the gathering of scientists, i.e. heritage and other cultural-educational institutions, can contribute to making bigger leaps and shifts taking place in creating a more complete picture of Croatian cultural identity. Following the goals of contemporary archivism and musicology, such as visibility and the education of local and wider communities, collaboration among institutions contributes to the preservation of the cultural memory of society. A renowned scholar, academician Radoslav Katičić, in the article *What Does History Mean to Us*? wisely notes:

> Historical research and historiographical spiritual activity focused on constant efforts to extend interest and life horizons of man in making the most of the past the present. History is not, therefore, explored as the past but as the present.[52]

Anyone who dares to touch the serenity of the 'dusty' archival (musical) traces of history should be aware of such 'meaning' of history.

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CHAPTER 10

TOWARDS NEW APPROACHES TO EDITING OLD MANUSCRIPTS AND DOCUMENTS

MARTINA KRAMARIĆ

Abstract

In this chapter, we will show how new technologies can be used as tools for the editing and presenting of old manuscripts and documents. In particular, Croatian medieval literature contains a large number of manuscripts written in Glagolitic, Cyrillic, and Old Latin scripts, but only a small portion of these texts have so far been published and made available to the public. The traditional, standard method of publishing of medieval manuscripts as books may be an expensive and time-consuming procedure. It can therefore be improved by digital infrastructure: publishing of old texts in XML file format online, and marking up of old texts using TEI tags. Besides that, the advantage of digital publication lies in enhanced possibilities. TEI (Text Encoding Initiative–TEI) tags are used to encode features crucial to linguistic, philological, and textological interpretation of texts in order to enable further scientific interpretation of these texts. We present here a Glagolitic medieval text, *Zrcalo člověčaskago spasenja* (1445), edited in XML editor Editix. Moreover, we describe the editing procedure, and explain the principles for the use of the TEI markup language. This edition serves as an example for possible future publications of Old Croatian literature, since this practice is still not widely used in Croatian philology. So far, only a small number of literary-historical texts have been critically prepared as electronic documents, and encoded according to TEI standards. The digitization of this medieval text was a pilot project conducted within the Cendari project in the National Library of the Czech Republic (department Manuscriptorium).

Keywords: Digital humanities, digitization, TEI, Glagolitic script, *Zrcalo člověčaskago spasenja*

Introduction

Old Croatian literature, especially Medieval and early Renaissance literature, is rich in written works that have survived in various manuscripts. It is usually said that Old Croatian literature is written in three languages (Latin, Old Croatian, and Old Church Slavonic) and in three scripts (Old Latin, Glagolitic, and Cyrillic), which makes it unique and valuable to researchers, scholars, and the interested public, yet at the same time incomprehensible and difficult to read for the wider public. A further obstacle is the fact that these manuscripts are hidden in different libraries, archives, scientific institutes, and small monastery libraries, and are rarely digitized or available for study and publishing. Some steps in this direction have been made, and some institutions offer digital collections or editions of digitized manuscripts (e.g., Croatian Academy of Sciences and Arts,[1] National and University Library in Zagreb[2]). Only a small portion of these texts from Croatian medieval literature have been published and made available to the public. So far, only two complete manuscripts have been edited as printed books with the transcribed text of the entire manuscript: *Vartal*, a critical edition of a 16th-century manuscript by Petar Lucić containing texts written in prose and verse, prepared by Nikica Kolumbić[3] and *Osorsko-hvarska pjesmarica*, a critical edition of a 16th century manuscript written in verse, prepared by Kristina Štrkalj Despot.[4] Another valuable book is *Croatian Medieval Poetry*–the first complete critical edition and monograph of Croatian medieval texts written in verse from the

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[1] *Digital collection of the Croatian Academy of Sciences and Arts*, accessed March 20 2018, http://dizbi.hazu.hr/: "DiZbi.HAZU currently comprises materials in the following original formats: books, journals, cast sheets, manuscripts, microfilms, music, photographs, plaster casts, medals and plaques, paintings, architectural plans and models, video."

[2] National and University Library in Zagreb currently runs a few projects in digitization old manuscripts, old Glagolitic manuscripts, old journals, maps, postcards, etc. Digitized materials are available on the portal *Digital collections of the National and University Library in Zagreb*, accessed March 20 2018, https://digitalna.nsk.hr/pb/.

[3] *Vartal*, [Sastavio] Petar Lucić; priredio Nikica Kolumbić; pogovor Ivo Babić (Split: Književni krug, 1990)

[4] *Osorsko-hvarska pjesmarica*, Priredila Kristina Štrkalj Despot, tekstove na latinskome jeziku priredila Sanja Perić Gavrančić (Zagreb: Institut za hrvatski jezik i jezikoslovlje, 2016)

late 14th century to the late 16th century, prepared by Amir Kapetanović, Dragica Malić, and Kristina Štrkalj Despot.[5] Other, older Croatian literary texts have only been partially edited, or small texts only have been the subject of critical editions in scientific articles, old journals, etc. This traditional, standard, method of publishing of medieval manuscripts as books may be an expensive and time-consuming procedure.[6] This procedure can, however, be improved with digital infrastructure: the online publishing of old texts in XML format, and the subsequent mark-up of old texts using TEI tags.

XML enables the preservation and digital edition of the text. TEI tags are used to encode features crucial to the linguistic, philological, and textological interpretation of texts in order to enable the further scientific interpretation of these texts. The TEI (Text Encoding Initiative – TEI)[7] is

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[5] Kapetanović, Amir, Dragica Malić, and Kristina Štrkalj Despot. *Hrvatsko srednjovjekovno pjesništvo: pjesme, plačevi i prikazanja na starohrvatskom jeziku.* Tekstove kritički priredili i osvrte na tekstove sastavili Amir Kapetanović, Dragica Malić, Kristina Štrkalj Despot, autor koncepcije i uvodne studije Amir Kapetanović (Zagreb: Institut za hrvatski jezik i jezikoslovlje, 2010)

[6] We can argue that digital publication is even more expensive and durable in cases of expensive digital infrastructure used. But, as E. Pierazzo says (Elena Pierazzo, *Digital Scholarly Editing: Theories, Models and Methods*. 2014. <hal01182162>, 90): "the availability and relatively low price of digital facsimiles as well as their ease of publication on the web have been often mentioned as one of the main reasons for the success of digital documentary editions." The manual procedures in both digital and printed editions in some cases may be improved by OCR or other handwriting recognition techniques, but their result must be thoroughly checked by an expert. As M. Piotrowski points out for the historical handwritten documents: "However, neither OCR nor offshore double-keying are generally suitable for older and handwritten documents. Here, transcription by experts is the only way to obtain digital text of a satisfactory quality." (Michael Piotrowski, "Natural Language Processing for Historical text," in: *Synthesis Lectures on Human Language Technologies #17*, ed. by Graeme Hirst. (Morgan & Claypool publishers 2012), 52). The advantages of digital publication among others lie in enhanced possibilities and we will write more about that later in the text. To see more about advantages and disadvantages of the digital editions compared to printed editions see in: Elena Pierazzo, *Digital Scholarly Editing: Theories, Models and Methods*, 182-217. From her conclusion about digital scholarly edition as "critical, abstract statements about historical documents which may be embodied by a digital, dynamic representation", we would like to stress the 'dynamic component'. (Elena Pierazzo, *Digital Scholarly Editing: Theories, Models and Methods*, 213).

[7] "The Text Encoding Initiative (TEI) is a consortium which collectively develops and maintains a standard for the representation of texts in digital form. Its main deliverable is a set of guidelines which specify encoding methods for machine-

one of the many XML (extensible markup language) schemas, and from its development in 1987 it has become the most used standard for the digital encoding of literary and language texts.[8] It is widely used by librarians, publishers, and individual scholars to represent all kinds of textual material for online research and teaching, and it can be easily modified for the editing of historical documents of any kind. Further, it will guarantee the standardization of the digital editions and seamless exchange with other platforms, or their transformation into other formats. With TEI, the encoding process can be adjusted to the specific needs of each editor and to the special demands and purposes of the digital edition. It allows the creation of critical editions, as well as reading editions targeting a larger audience.

Croatian digitization projects

Although TEI has become the *de-facto* standard in the digital humanities for encoding or storing any kind of text, including lexical sources, in XML format, digital editions of old manuscripts and documents are still the exception rather than the rule, in Croatian philology. One praiseworthy project is *Croatiae auctores Latini* (CroALa),[9] which has created a digital collection of Latin texts written by authors of Croatian origin from the Middle Ages to the 20th century, encoded in TEI, and published online. So far, the collection consists of 449 documents by 181 authors. Another digital collection is *EDICIJA – a digital library of Croatian written heritage*.[10] It is being developed within a national Croatian cultural heritage project, aiming towards the digitization of archive, library, and museum materials. Only five works from Old Croatian literature have been digitized, and the project is finished. Unfortunately, the *Croatian Language Repository*,[11] a

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readable texts, chiefly in the humanities, social sciences, and linguistics. The TEI Guidelines have become an accepted standard for digital text, especially where there are concerns about long-term preservation, interchange, or interoperability." *TEI guidelines*, accessed March 20 2018, http://www.tei-c.org/index.xml.

[8] The same is stressed by E. Pierazzo (Elena Pierazzo, *Digital Scholarly Editing: Theories, Models and Methods*, 14): "The TEI in almost thirty years has not only supported research in digital editing, but has also contributed to shaping it."

[9] *Portal Croatiae auctores Latini (CroALa)*, accessed March 20 2018, http://croala.ffzg.unizg.hr/.

[10] "Portal Edicija – Digital library", accessed March 20 2018, http://www.ffos.unios.hr/EDICIJA/digitalnaZbirka/index.php.

[11] *Portal "The Croatian Language Repository"*, accessed March 20 2018, http://riznica.ihjj.hr/index.hr.html.

project of the Institute of Croatian Language and Linguistics, is currently inactive. This repository prepared documents for the Croatian Language Corpus, and its basic task was to create publicly available resources for the Croatian language. It included literature and other written sources dating from the outset of the final shaping of Croatian language standardization, from the second half of the 19th century, until today. There are a few projects focused on digitizing the rich written heritage of the Croatian Medieval period and later, but they are mainly oriented towards the digitization of manuscripts, and not the texts they contain. The project *Digitization, bibliographic description, and research of texts written on Glagolitic, Croatian Cyrillic and Latin scripts until the end of 19th century in Zadar and Šibenik area*[12] is organized by the Department of Information Sciences of the University of Zadar and Vestigia Manuscript Research Centre of the University of Graz, and is supported by the Ministry of Culture of the Republic of Croatia. On its portal, *Written Heritage*, the manuscripts are digitized and described, thus creating a manuscript catalogue with watermark database.

The newly established *Croatian Glagolitic Script*[13] project is focused on the digitization of Croatian Glagolitic heritage, and it is run by the National and University Library in Zagreb, in cooperation with other Croatian scientific institutions. It offers valuable collections of high quality scanned Glagolitic manuscripts and metadata concerning them. It does not yet contain digitized manuscript texts, however, their addition is planned in future phases of the project. TEI can be very useful in digitizing old dictionaries, and some of the most important Croatian old dictionaries are digitized and searchable online, via the *Croatian Old Dictionary Portal*.[14]

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[12] *Written heritage: online portal of digitized Croatian written heritage from Zadar and Šibenik area*, accessed March 20 2018, http://pisanabastina.unizd.hr/.

[13] The project was developed in several phases from 2005-2017 under different names, first as a project entitled *The Digitization of Croatian Manuscript Materials at International Institutions* at the National and University Library in Zagreb, then as a project entitled *Croatian Glagolitic Script: the Digitization of Material and the Creation of a Digital Collection* in 2017 and then as a project *Croatian Glagolitic Script: the Digitization of Material and the Creation of a Digital Collection II* in 2018. Finally, it was established as the *Croatian Glagolitic Script project* at glagoljica.hr. "glagoljica.hr", accessed March 20 2018, https://glagoljica.hr/.

[14] These are digitized dictionaries: Juraj Habdelić, *Dictionar ili Réchi Szlovenske zvexega ukup zebrane, u red postaulyene, i Diachkemi zlahkotene trudom Jurja Habdelicha, masnika Tovarustva Jesusevoga, na pomoch napredka u diachkom navuku skolneh mladenczeu horvatszkoga i szlovenszkoga naroda*. Graz, 1670; Bartol Kašić. Manuscript without a title (*Croatian (Cakavic–Italian dictionary)*).

All of these collections cover only a small portion of the rich fund of Old Croatian literature.

In this presentation, we will present the encoding and editing of the Glagolitic medieval text *Zrcalo člověčaskago spasenja* (1445) as a digital edition in the Editix XML editor. Editix[15] is one of many editors, others include: jEdit,[16] Oxygen,[17] etc. Editix is available online and is completely free, even allowing offline editing.

Old Croatian work *Zrcalo člověčaskago spasenja* (1445)

The Old Croatian literary work *Zrcalo člověčaskago spasenja* (1 - 162a folio) is a large part of the *Miscellany of Deacon Luka*, and it is assumed to have been translated from an Old Czech original alongside other medieval literary translations[18] during the residency of Croatian Glagolitic monks in Prague, from 1346 to 1419.[19] The manuscript is held at the Vatican Library

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Rome, 1599; *Libellus alphabeticus Cùm Nonnullis Cathecheticis addito vocabulario brevi latino, illyrico, germanico (Rerum communiter occurrentium–cum licentia superiorum.)*, S. l. (probably in Slavonia), 1756; Faustus Verantius (Faust Vrancic). *Dictionarium quinque nobilissimarum Europae linguarum Latinae, Italicae, Germanicae, Dalmaticae et Ungaricae cum vocabulis Dalmaticis quae Ungari sibi usurparunt*. Venice, 1595. *Croatian Old Dictionary Portal*, accessed March 20 2018, http://crodip.ffzg.hr/default_e.aspx.

[15] *EditiX: Open Source XML Editor*, accessed April 23 2018, http://www.editix.com/.

[16] *jEdit–Programmer's Text Editor–overview*, accessed April 23 2018, http://www.jedit.org/.

[17] *Oxygen XML Editor*, accessed April 23 2018, https://www.oxygenxml.com/.

[18] For a list of translated works from Old Czech to Old Croatian language (10 prosaic works and one poem), see Stjepan Ivšić, "Dosad nepoznati hrvatski glagolski prijevodi iz staročeškoga jezika," *Slavia*, I (1922-1923): 38-63, 285-301, Stjepan Ivšić, "Još o dosad nepoznatim hrvatskim glagolskim prijevoda iz staročeškoga jezika," *Slavia*, VI (1927-28), 40-63, Johannes Reinhart, "Husov Výklad desatera Božieho přikázanie u hrvatskoglagoljskom (starohrvatskom) prijevodu," *Slovo*, 47-49 (1999): 223-225, Martina Kramarić, "Starochorvatské středověké překlady ze staročeštiny a jejich staročeské předlohy," in: *Cesta k rozmanitosti aneb Kavárenský povaleč digitálním historikem středověku. Sborník příspěvků k životnímu jubileu PhDr. Zdeňka Uhlíře*, ed. by Renáta Modráková and Tomáš Klimek (Praha: Národní knihovna České republiky, 2016), 155-167, and Martina Kramarić, *Bohemizmi u Zrcalu člověčaskago spasenja (1445) u kontekstu starohrvatskih prijevoda sa staročeškoga jezika* (Rijeka: PhD diss., University of Rijeka, 2015).

[19] To find out more about the historical and sociolinguistic background and context of the so called Emmaus period of the Croatian Glagolitic literacy, the reasons for its occurrence, and its consequences and contributions in form of translated

(Borg. L. VII. 9, illirico 9) and it has been digitized and made available online with open access at the Digital Vatican Library. The Old Czech template of the text survives in multiple versions, and is entitled *Zrcadlo člověčieho spasenie*. The only complete version survived in *Krumlov miscellany*.[20] The entire text of *Zrcadlo člověčieho spasenie* was transcribed and edited by Petr Nejedlý in *Textová banka*, the publishing module within the framework of the online Old Czech dictionary.[21] Other two Old Czech versions are only partially saved and some of its manuscripts folio are quite damaged: one version (Rukopis A) from Unhošt and Časlav and second from Znojmo (Rukopis A2).[22] The original work from which the Czech

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manuscripts to both Czech and Croatian culture, see Martina Kramarić, "Interpretacije emauske epizode u češkim i hrvatskim povijestima jezika i književnosti," in: Prolínání slovanských prostředí, edited by Marcel Černý, Kateřina Kedron, and Marek Příhoda. Červený Kostelec; Praha: Filozofická fakulta Univerzity Karlovy v Praze, 2012, 97-107 (with a large number of references on this topic), and Martina Kramarić, "Bohemizmi u Zrcalu člověčaskago spasenja (1445.) u kontekstu starohrvatskih prijevoda sa staročeškoga jezika."

[20] It is digitized with open access on Manuscriptorium, Digital Library of Written Cultural Heritage of the National library in Prague. *Krumlovský sborník* (III B 10), accessed March 20 2018,
http://www.manuscriptorium.com/apps/index.php?envLang=en#search.

[21] *Vokabulář Webový*, http://vokabular.ujc.cas.cz/moduly/edicni/edice/539c1c9b-c50f-49ae-a0ee-3c12319a23a2/plny-text/s-aparatem/folio/1 with editorial note Nejedlý, Petr. "Ediční poznamka: Knihy, jenž slovú Zrcadlo člověčieho spasenie, rukopis K," accessed April 23 2018,
http://vokabular.ujc.cas.cz/moduly/edicnipoznamka.aspx?id=ZrcSpasK.

[22] These versions are from the Časlav (Čáslav), which contains three folios with parts of the three chapters, and from Unhošt (Unhošť), which contains parts of the two chapters, both from the same manuscript from the early 15th century (Pavel Brodský, *Katalog iluminovaných rukopisů Knihovny Národního Muzea* (Praha: KLP Praha, 2000), 313-314; Marek Brčák et al., *Rukopisné zlomky Knihovny Národního Muzea, Signatura 1 A* (Praha: Scriptorium Narodní Muzeum, 2014), 304-305. They are currently held at the Czech National Museum, sign. 1 A c 75/1-5. The third version, which Brodský supposed was not from the same manuscript as the previous fragments (Brodský, "Katalog", 313-314), was discovered in Znojmo, and contains part of the text of Chapter 13. It is now also held in the Czech National Museum, sign. 1 A c 75/6. The fragments from Unhošt and Časlav contain parts of chapters 19, 20, 23, 27, 28, and 31-33. Petar Nejedlý published the transcribed text of all three fragments in *Textová banka*, the publishing module within the framework of the online Old Czech dictionary. "Vokabulář Webový", accessed March 20 2018,
http://vokabular.ujc.cas.cz/moduly/edicni/edice/bd52c93e-4996-4935-bbba-5ece364eb3d1/plny-text/s-aparatem/folio/1r (manuscript A from Unhošt and Časlav) and http://vokabular.ujc.cas.cz/moduly/edicni/edice/cac5b4d8-5021-4293-

version was translated is the 14th century Latin poem *Speculum humanae salvationis*, one of the most popular late medieval literal works which have survived in more than 350 different manuscripts written in blockbooks, and in sixteen later incunabula.[23] The Croatian translation *Zrcalo člověčaskogo spasenja* contains 42 chapters, although both Latin and Czech version contain prologus and prohemium (or tables of chapters), and 45 chapters.[24]

Since the Old Croatian translation is a literal translation of the Czech template, in further digitizing this work, we would like to compare the text to the Old Czech versions, word-for-word.[25] This type of translation makes this particular task suitable to this type of digitization (the creation of parallel corpora: a database of a TEI-encoded version of the Old Croatian *Zrcalo* and its Old Czech template). The creation of parallel corpora of three TEI-encoded versions of the same medieval text–one complete Czech version, another Czech version preserved only in fragments, and the complete version of its Croatian translation–in order to enable further linguistic, philological, and textological interpretation of these texts. This research could deal in two main issues: the extent of the linguistic influence of the Old Czech language on the Old Croatian system of the translated version on multiple linguistic levels, and the determination of which of the

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ab3a-3ff203563b53/plny-text/s-aparatem/folio/1r (manuscript A2 from Znojmo), accessed March 20 2018.

[23] Wilson, Adrian, and Joyce Lancaster Wilson, *A Medieval Mirror: Speculum humanae salvationis 1324-1500* (Berkeley; Los Angeles; Oxford: University of California press, 1984), 10-12.

[24] The final three chapters are considered a separate work entitled *Zrcalo Marijino*.

[25] Since the software for creation of the parallel corpora has still not been developed in Manuscriptorium, we will refer to a project which is oriented towards that goal. Project *HyperMachiavel* (linking and comparing various French translations of Machiavel's *The Prince* (Machiavelli, *De Principatibus*), has developed *HyperMachiavel*: a translation comparison tool (http://hyperprince.ens-lyon.fr/, accessed April 20 2018) that can aid research communities comparing several editions of one text and in particular comparing translations. To see more about this project: Gedzelman Séverine, and Jean-Claude Zancarini, "HyperMachiavel: a translation comparison tool for the digital humanities community" (paper presented at the conference Digital Humanities 2012, Hamburg) and the abstract in: Jan Christoph Meister (ed.), *Digital Humanities 2012 conference abstracts* (Hamburg: Hamburg University Press, 2012), 198-201. Versioning machine is also software for displaying and comparing different versions of literary texts is and it offers "parallel views for TEI aligned corpora with no constraint on the number of displayed texts." (Séverine, and Zancarini, "HyperMachiavel: a translation comparison tool for the digital humanities community"). See more on: *Versioning machine 5.0*, accessed April 20 2018,
http://v-machine.org/.

two Czech versions is actually closer to the original. Since Stjepan Ivšić[26] assumed that Old Croatian version was translated from an older version or from an Old Czech original, this research will make it easier to determine which Old Czech version is more similar to the Old Czech original, and thus to the Old Croatian text. This would be one useful aspect of a digital edition, which could be created through the use of the appropriate software infrastructure.

Creation of a digital edition

In this chapter, we present the creation of a digital edition of the Croatian Glagolitic manuscript *Zrcalo člověčanskago spasenje*. I describe the editing procedure, and explain the usage principles of the TEI markup language. Moreover, I do not analyse or describe the technical specifications of TEI or XML, as we are more interested in the process of transforming an old written document into a marked-up text as the basis for online publication. This manuscript was encoded in TEI during my CENDARI fellowship in the Digital Library Manuscriptorium of the Czech National Library,[27] and the TEI module and the subset of elements used for this digitization were chosen according to the Manuscriptorium and its needs.[28]

The first step towards digitization is the conversion of the digitized manuscript image into machine-readable text. In some cases, we can use the OCR (optical character recognition) process to convert images into Microsoft Word .doc or .docx format, but not for the Glagolitic script. Another principle is the manual transcription of a manuscript into Microsoft Word format or directly into an XML editor. For this kind of digitization, the editing principle of the text is not preset; text can be either transcribed or transliterated[29] according to the editor's wishes and needs.

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[26] Stjepan, Ivšić, "Još o dosad nepoznatim hrvatskim glagolskim prijevoda iz staročeškoga jezika," 43-49.

[27] "CENDARI is an acronym referring to the Collaborative European Digital Archival Research Infrastructure, a 4-year, European Commission-funded project which integrates digital archives and resources for the pilot areas of medieval culture and the First World War." (http://www.cendari.eu/about, accessed March 20 2018). The proposed project was *Creating parallel mediaeval corpora: a database of a TEI-encoded version of the Old Croatian text Zrcalo and its Old Czech templates.*

[28] Manuscriptorium uses the TEI P5 Enrich customization with some additional local constraints. *Manuscriptorium, TEI P5 ENRICH Schema*, accessed March 20 2018, http://www.manuscriptorium.com/en/tei-p5-enrich-schema-en.

[29] Transliteration is the conversion of a text from one script to another – or, more specifically, the procedure of replacing text written in one script with the characters

In our case, the Glagolitic text had already been transcribed and critically prepared as an annex to the doctoral thesis: *Czech loanwords in* Zrcalo člověčaskago spasenja *(1445) in the context of Old Croatian translations from the Old Czech language* (Martina Kramarić 2015).

The second step is defining the structure of the document, and choosing the set of markup language.

The main division in the structure of the document is in the TEI header and body. In the TEI header, we added bibliographical information about the manuscript, the name of the manuscript, signature, library, the editor's name, and the type of the edition (electronic edition made for Manuscriptorium).

The TEI header looks like this:

```
<TEI xmlns="http://www.tei-c.ns/ns/1.0">
    <teiHeader>
        <fileDesc>
            <titleStmt>
                <title>Zrcalo člověčaskago spasenja</title>
            </titleStmt>
            <editionStmt>
                <edition>elektronická edice</edition>
                <respStmt>
                    <resp/>
                    <name ref=""/>
                </respStmt>
                <respStmt>
                    <resp>editorka</resp>
                    <name>Martina Kramarić</name>
```

---

of another script in predictable way. In this case, this implies the conversion of text from Glagolitic, Cyrillic, or Old Latin script into Latin script. In addition to transliteration, transcription attempts to mark the sounds of the graphemes–in the case of the transcription of the Old Croatian language, this means noting of the presumed sound of a grapheme. According to this, the Glagolitic *ě* (jat) would be transliterated as ê, but transcribed as *ja / e / i / je* depending on its distribution in the Old Croatian language. For detailed explanation see Amir Kapetanović, "Digitalizacija korpusa starohrvatskih tekstova i kritika teksta," in: *The Future of Information Sciences: INFuture2007 – Digital Information and Heritage*, edited by Sanja Seljan and Hrvoje Stančić. (Zagreb: Odsjek za informacijske znanosti, Filozofski fakultet, Zagreb), 178-179. For the principles of transcription in the *Old Croatian Dictionary project*, see Amir Kapetanović, "Najstarije hrvatsko pjesništvo", in Hrvatsko srednjovjekovno pjesništvo. pjesme, plačevi i prikazanja na starohrvatskom jeziku (Zagreb: Institut za hrvatski jezik i jezikoslovlje, 2010), LIV-LIX.

```
            </respStmt>
         </editionStmt>
         <publicationStmt>
            <publisher>Manuscriptorium.com</publisher>
         </publicationStmt>
         <sourceDesc>
            <listBibl>
               <bibl>
                  <idno>Borg. L. VII. 9, illirico 9</idno>
                  <note>Zdroj fulltextu. Uložení: <seg
type="country">Città del Vaticano</seg><seg type="settlement">Città del
Vaticano</seg>
                        <seg type="repository">Biblioteca Apostolica
Vaticana</seg>
                  </note>
               </bibl>
            </listBibl>
         </sourceDesc>
      </fileDesc>
   </teiHeader>
```

To define the text structure (body), we used the TEI subset of elements from
the TEI module text structure: <front>, <body>, <back> etc.).[30] At the
beginning, we again added the title, and the fact that the author of the
document is unknown:

```
<text>
      <front>
         <docAuthor>unknown</docAuthor>
         <docDate/>
         <docTitle>
            <titlePart>Zrcalo člověčaskogo spasenja</titlePart>
            <addSpan/>
         </docTitle>
      </front> .....
```

For the creation of the body, we needed to follow the original structure
of the text from the manuscript. The text was originally divided into
chapters, and each chapter is divided into three or four subchapters. One
problem with Croatian text is the lack of meta-markup material in the
modern sense: the lack of titles and numbers of chapters and subchapters.
These textual elements had to be substituted with comments added to the

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[30] See chapter 4 *Default Text Structure in TEI P5 Guidelines*, accessed April 20
2018, http://www.tei-c.org/release/doc/tei-p5-doc/en/html/DS.html.

TEI document with the <note> element,[31] and the numbers of each chapter were marked using the <supplied> element.[32] While defining the structure of the text, we wanted to shape it like its Czech template (the version preserved in *Krumlov miscellany*) or Latin original. Although the Croatian translation is a literal translation of its Czech template, their shape (layout) is different. The Czech manuscript contains illuminations and their titles, while the Croatian manuscript is not illuminated, instead using the titles of the Czech illuminations as the titles of its chapters.[33] For such discrepancies between versions, we used comments in the <note> element. These comments and explanations will enable the Croatian translation to be further connected to its Czech template. For the structure of the body, we used <div> elements[34] for the chapter and <p> (from the paragraph) element[35] for each subchapter. The place of the titles in the original text was marked with the <label> element.[36]

For features characteristic of the old manuscripts, we used special elements such as <pb> element (page beginning)[37] with the attribute *n* <pb n=""/> for the folio of the manuscript, <supplied> element for missing parts

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[31] <note> contains a note or annotation. "P5: Guidelines for Electronic Text Encoding and Interchange", accessed April 20, 2018,
http://www.tei-c.org/release/doc/tei-p5-doc/en/html/ref-note.html.

[32] <supplied> signifies text supplied by the transcriber or editor for any reason; for example, because the original cannot be read due to physical damage, or because of an obvious omission by the author or scribe. *P5: Guidelines for Electronic Text Encoding and Interchange*.

[33] The original Latin work was created as a poem divided into chapters and subchapters. Each part of the chapter contains precisely one hundred verses in order to fit into one manuscript folio column. At the top of each column, an illuminated miniature and its title present the theme of the part of the chapter. Later versions and translations were no longer in verse, although they did retain the structure of the original work and the illuminated miniatures and their titles at the top of the manuscript. However, the chapters written in prose are no longer certain to fit in one column or on one page (as in the Czech version from the Krumlov miscellany), so the titles of the chapters and subchapters do not follow the flow of the text.

[34] <div> (text division) contains a subdivision of the front, body, or back of a text. *P5: Guidelines for Electronic Text Encoding and Interchange*.

[35] <p> (paragraph) marks paragraphs in prose. *P5: Guidelines for Electronic Text Encoding and Interchange*.

[36] <label> contains any label or heading used to identify part of a text, typically but not exclusively in a list or glossary. *P5: Guidelines for Electronic Text Encoding and Interchange*.

[37] <pb> (page beginning) marks the beginning of a new page in a paginated document. *P5: Guidelines for Electronic Text Encoding and Interchange*.

of the text, words, or letters, and a group of elements that aided us in
marking corrections made to the original document:

svezanja<note>

<choice>
    <corr>svezanja</corr>[38]
    <sic>svesvezanija</sic>[39]
</choice>
</note>.

The data that we marked with these elements are important for the
further textological and philological interpretation of the text. Although our
digital text is an example of a simply encoded text marked mainly on the
formal level according to the needs of simple electronic editing, the result
is a digital edition of the text of the manuscript.[40] It is scientifically edited
text, accompanied with the critical apparatus including emendations,
comments on writing errors, comments on the language, palaeography,
orthography, and relation to its possible Czech template. By adding the
metadata[41] about manuscripts and structural metadata, scholarly descriptions,
image descriptions, metadata regarding codicology, digital object metadata,
reports about additional restoration, and, ideally, even the full range of
existing research literature, we can create an extra value of the critical text
edition, which is even more useful to scholars and other interested publics.[42]

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[38] <corr> (correction) contains the correct form of a passage apparently erroneous in
the copy text. *P5: Guidelines for Electronic Text Encoding and Interchange*.

[39] <sic> (Latin for thus or so) contains text reproduced although apparently incorrect
or inaccurate. *P5: Guidelines for Electronic Text Encoding and Interchange*.

[40] "It is important to differentiate between the digital scholarly editions and digitized
editions. A digitized print edition is not a 'digital edition' in the strict sense used
here. A digital edition cannot be printed without a loss of information and/or
functionality. The digital edition is guided by a different paradigm. If the paradigm
of an edition is limited to the two-dimensional space of the 'page' and to typographic
means of information representation, then it's not a digital edition." Patrick Sahle, *A
catalog of: Digital Scholarly Editions* (2008), accessed May 20 2018,
http://www.digitale-edition.de/.

[41] The digital library Manuscriptorium provide possibility of adding metadata and
scholarly description besides the manuscripts image and its text (more on this in the
next chapter).

[42] The importance of the critical digital edition is stressed by Christoph Flüeler in
his presentation at the 50th International Congress on Medieval Studies in
Kalamazoo: "a critical text edition can, for example, highlight the historical
dimensions of the transmission of a text and use a critical apparatus to tease out
intertextual aspects of the text in ways that far exceed simple transcription. In

Possibilities for further encoding are numerous, and they include the markup of elements of the text that are crucial for linguistic analysis (parts of speech, grammatical elements, etc.), palaeographic analysis (special graphemes, ligatures, etc.).

Electronic historical texts prepared in this way can be searched and automatically processed so they can be further used for building corpora, concordances, dictionaries, etc. As M. Piotrowski described:

> everything that can be done with modern texts can also be done with historical texts: full-text search, concordancing, lemmatization, morphological and syntactic analysis, text mining, machine translation, and so on.[43]

Introducing the application of NLP (Natural Language Processing) tools and techniques increases the possibilities for further textual analysis.[44]

We used HTML to edit and preserve the text on the world wide web. Unfortunately, there is currently no digital collection of this kind for old documents, whose domain we could use to edit our document. The next possibility was editing it on the website of the Digital Library at the Manuscriptorium of the National Library in Prague.

Manuscriptorium

The Digital Library Manuscriptorium is the second-largest digital library in Europe for pre-18th-century old manuscripts and documents. It is "a virtual research environment providing access to all existing digital documents in the sphere of historic book resources (manuscripts, incunabula, early printed books, maps, charters and other types of documents). These historical resources, otherwise scattered in various digital libraries around the world, are now available under a single digital library interface."[45] Beside the digital documents, the Manuscriptorium enables ready access to concentrated

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addition, a critical text edition can drill down to a more original text, identify errors in transmission, and provide a text so convincing in its authenticity that it comes to be accepted in the scholarly research community as an authoritative version of the text." Christoph Flüeler, "Digital Manuscripts as Critical Edition," Paper presented at the 50th International Congress on Medieval Studies in Kalamazoo, MI, May 2015, accessed May 27 2018, https://schoenberginstitute.org/2015/06/30/digital-manuscripts-as-critical-edition/.

[43] Piotrowski. "Natural Language Processing for Historical text."

[44] That also depends on the development of the NLP tools for the specific historical language.

[45] *Manuscriptorium, About project*, accessed March 20 2018, http://www.manuscriptorium.com/en/about-manuscriptorium.

information on historical resources, its metadata and descriptions. The Manuscriptorium's digital library aggregates historical documents from domestic and foreign European institutions and even those beyond of the borders of the European Union. They are Europeana sub-aggregator for the sphere of historical document. The historical resources otherwise scattered in various digital libraries are, and could be, available under a single digital interface.

Their editor research guide enables the virtual publishing of images from manuscripts, as well as the publishing of text from images. Further possibilities include connecting encoded parts of texts with digital images, correlating words from texts with words from other versions of the same text or from other documents with the same characteristics or from the same period.

Once the digitized *Manuscript of Deacon Luka* is available at the Manuscriptorium Digital Library, we will publish its text. The Manuscriptorium strives to collect digital manuscripts from different countries and libraries and edit them with their relevant text.[46] Recently, they signed a contract with the National and University Library in Zagreb, and the first 30 Croatian manuscripts will soon be edited on the Digital Library website. The next step will be the preparation of a digital edition of their text, which will thus enable the creation of a digital collection of old Croatian texts and documents through the use of the Manuscriptorium infrastructure.

Conclusion

Digital humanities is an academic field which deals with the development and application of computational tools and methods for studying language, literature, history, and other traditional humanistic disciplines. It includes the systematic use of digital resources in the humanities, as well as the reflection on their application[47] with the recognition that the printed word is no longer the main medium for knowledge production and distribution.[48]

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[46] Manuscriptorium collaborates with *Textová banka*, the publishing module within the framework of the online Old Czech dictionary (*Vokabulář Webový*) creating thus a virtual research environment.

[47] Drucker, Johanna. *Intro to Digital Humanities: Introduction*. UCLA Center for Digital Humanities (September 2013), accessed April 26 2018, http://dh101.humanities.ucla.edu/?page_id=13.

[48] *Digital humanities*, Wikipedia, cited from Anne Burdick, Johanna Drucker, Peter Lunenfeld, Todd Presner, and Jeffrey Schnapp. *Digital_Humanities* (PDF). Open

Digital technologies are created to provide help in the research, study, and promotion of philological, lexicographical, literary, and other humanistic disciplines. This chapter has shown the development of digital tools and methods in the field of the digitization of old manuscripts and early printed books in Croatia. As has been described here, the main concern so far has been the digitization of images–digital scans of manuscripts–but not the texts they contain. Another obstacle is the fact that the digitized material is scattered throughout various digital infrastructures–each institution is occupied with its own heritage material, exclusively. A digital interface that presents both the digital text of a manuscript as the primary source, and an image of the same manuscript as a digital copy of the source, has not been developed. In this chapter we wanted to draw attention to the digital library Manuscriptorium of the National Library in Prague, and their editor research guide, which enables both the virtual publishing of the images and texts of the old manuscripts and documents. These types of correlation and data accessibility are crucial for deep diachronic analyses and corpus-based research of the literary and historical texts written in manuscripts and early printed books, which is mostly carried out by philologists and linguists. The study of Mediaeval literature and its written sources, covering literary, religious, historical, and juridical, themes is an important part of the study of Mediaeval culture and history in general. However, for the purposes of research, it is first necessary to create more extensive digital editions of as-of-yet unpublished manuscript texts from Croatia's rich Mediaeval literature. Although a number of special skills are required to do so (in palaeography, textology, codicology, comparative literature, history of culture and philology) digital tools and technologies can be used to advance and accelerate this long process.

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TOPIC IV:

GLAGOLITIC AND LATIN WRITTEN HERITAGE AS A SOURCE FOR HISTORIOGRAPHIC AND LINGUISTIC RESEARCH

CHAPTER 11

GLAGOLITIC DOCUMENTS CONCERNING VISITATIONS OF NIN BISHOPS IN THE 17TH AND 18TH CENTURIES

IVICA VIGATO
AND GROZDANA FRANOV-ŽIVKOVIĆ

Abstract

In this chapter we have analyzed the previously unpublished documents regarding the beginnings of the bishop's visitation of the parishes in the Nin Diocese. These sources are important because they contain data with moral-theological provisions in relation to the lifestyle of the parishioners, as well as the clergy. From these records, we managed to reconstruct their way of life and the manner they used to 'model' the world, that is, how they interpreted the world at the time they were written. It is a collection of manuscripts composed of orders, mainly correspondences between the Episcopal Curia and the parishes. They are written in Italian and Croatian, and in the Latin, Glagolitic, Cyrillic and Bosanica scripts. These texts are also linguistically analysed.

Keywords: Nin Diocese, bishops, visitations, cursive Glagolitic script, Croatian Cyrillic script, 17th and the beginning of the 18th centuries.

Introduction

The present-day Zadar Archdiocese consists of the former Archdiocese of Zadar and the Diocese of Nin, which was abolished and merged with the Archdiocese of Zadar in 1828. The Zadar Archdiocese is geographically located in the central part of the eastern side of the Adriatic coast.

The first historical data about the Nin Diocese dates back to the time of Bishop Teodozije (879 – 890). The most difficult period for the diocese was

during the Ottoman raids in the time of Bishop James (Jakov) Bragadin (1462 – 1474) when many villages were devastated. After 1527, the Turks began occupying many villages in this area, and had a large part of the Nin Diocese under their authority. In 1672, Bishop Francis (Franjo) Grassi (1667 – 1677) obtained approval (ferman) from the Turkish authorities (Sultan Mehmed IV) for visitations and the spiritual care of the Nin parishes, which were situated on Ottoman territory. During the time of Bishop John (Ivan) Borgoforte (1677 – 1687), the Nin Diocese was freed from Ottoman occupation, and after its liberation the part of the diocese situated in Lika was merged with the Senj Diocese. The Nin Diocese was abolished in 1828 by the bull entitled "Locum Beati Petri" issued by Pope Leo XII, and was merged with the Zadar Archdiocese[1].

The Writings of the Nin Diocese are kept in the Archives of the Archdiocese of Zadar, and cover the period from 1557 to 1830. The writings are arranged in nine books, 57 boxes, and six bundles that contain the following records: records of the manor (four books, 27 boxes), marital records (14 boxes), court records (seven boxes), visitations (three boxes), registers (five books, two bundles), economic writings (three boxes), manuscripts (one bundle), prints (one bundle), and miscellaneous (two bundles).[2]

The preserved archival material spans from the time of the Nin bishop, Mark (Marko) Loredano (1554 – 1577), until the abolishment of the Nin Diocese and its last general vicar, Nicholas (Niccolo) Muzio (1829 – 1830). Many bishops' orders, official and private correspondence between the bishop and priests and village leaders and representatives, can be found in this fund.

The documents were written in the Italian[3] and Croatian languages, and in the Latin, Glagolitic and Bosanica scripts (which, in scholarly literature, is often called 'Bosančica', and also Croatian Cyrillic script) and some documents were written in Cyrillic.

These documents are planned to be digitized within the project *Digitization, bibliographic description and research of texts written in*

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[1] Oliver Modrić and Josip Kolanović, *Vodič Arhiva Zadarske nadbiskupije* (Zadar: Državni Arhiv, Zadarska nadbiskupija, 2013), 112-117.

[2] Modrić, Kolanović, J., *Vodič Arhiva Zadarske nadbiskupije*; Josip Kolanović, „Zbornik ninskih isprava od XIII do XVII stoljeća“. *Radovi Instituta JAZU u Zadru*, 16-17, (1969): 485-548.

[3] Zadar was under Venetian rule from 1409 to 1797. In their official correspondence Venetian authorities mainly used Italian, Latin and Croatian language but, from time to time, their records were written in Glagolitic and Bosanica script, which can be confirmed in numerous documents from the various funds in the State Archives in Zadar.

Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and Šibenik area (Written Heritage).[4] The head of the project is Associate Professor Marijana Tomić, PhD.

The project is being carried out at the University of Zadar by the Department of Information Sciences in co-operation with Vestigia Manuscript Research Centre of University of Graz, Austria. The associates come from several departments of Zadar University, as well as from Croatian and outlander institutions interested in different aspects of manuscripts (particularly of text written in Glagolitic and Croatian Cyrillic (called *Bosančica*) scripts), early printed books research, information sciences, and digital humanities. The project is supported by the Ministry of Culture of Republic of Croatia.

Publication of these transliterated texts will certainly enable further historical, cultural, social, linguistic, and other research.

For this purpose, we have analyzed a group of unpublished documents from the records related to the episcopal visitations of the Nin bishops, and written in cursive Glagolitic script.

Besides the information concerning visitations, the most interesting are the moral-theological directives, which were written by the bishop, before, and after, he had estimated the general religious state of the inhabitants of the diocese. These moral-theological provisions can be found in certain notices about the beginning of the visitation or as separate documents.[5]

It is important to emphasize that the Venetian authorities also used the Glagolitic alphabet for official purposes. A large number of orders, notices, letters of rectors and governors, etc., written in the Glagolitic script can be found in various funds. In the fund containing last Wills from the rector's office (*conte*) in Zadar, there are around 320 preserved Wills written in the Croatian language and in the Glagolitic signature. The documents presented here demonstrate that this applies to the ecclesiastical authorities as well. In the Archdiocese of Zadar alone,[6] 450 codices containing Glagolitic registers

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[4] *Digitization, bibliographic description and research of texts written in Glagolitic, Croatian Cyrillic and Latin scripts until the end of the 19th century in the Zadar and Šibenik area*, a joint project of the Department of Information Sciences of the University of Zadar, Croatia and Vestigia Manuscript Research Centre of the University of Graz, Austria. Homepage, accessed May 20 2018, http://pisanabastina.unizd.hr/

[5] Grozdana Franov-Živković, Glagoljske moralno-kazuističke odredbe ninskih biskupa 17. i 18. st. *Radovi Zavoda za povijesne znanosti Hrvatske akademije znanosti i umjetnosti u Zadru*, 57, (2015): 185 - 216.

[6] Codices and documents from Istria and Kvarner area (a great number of preserved codices was found in that region), as well as a smaller number of preserved codices from the Croatian hinterland, Šibenik, Split and Dubrovnik area are not taken into

have been preserved (from the period after the Council of Trent, 1565 – 1825, when tabular matriculae started to be used),[7] which include registers of baptisms and confirmations, books of souls, books of confraternities (*madrikule*), account books of confraternities and churches, lists of deceased parishioners, books of fishing expenses, books of sermons, books of anniversary memorials, books of endowments (*laši*), and collections of spiritual texts. These documents help us to study the lifestyle of the people in the time when they were written, and enable us to properly identify and define their view on the world and the manner they used to 'model' the world. In particular, we want to analyze the language they used, and explain the documents in the way they were interpreted, in the time when they were written. This can only be done if these documents are accurately transliterated, if we examine their language and historical context in which they were recorded, as well as by studying the persons who wrote these documents. The documents examined in this article slightly differ in form from other Glagolitic documents. Namely, in this case, the authors were more likely foreigners, presumably Venetians, who were the bishop's chancellors. Nevertheless, they were witnesses of the contemporary events, while the bishop's orders they recorded and implemented reflected the problems that appeared in practice, among the minor clergy (Glagolitic priests) and the population.[8]

In his writings, the bishop's notary lists the villages that have to be visited, as well as the obligations of the priests. The priests had to be presented during the visitation and they had to have all documents regarding the condition of the parish, the registers, the books of the confraternities, the Mass books, the inventory lists, the names of parishioners, the list of students educated to become priests (*žakani*), the permits *(licencije),* and the state of souls (so called *Status animarum*). During his visit the bishop administered the sacrament of confirmation and evaluated the moral state of the parish, as well as whether priests and their

account in this examination. It should be mentioned that in the area of Kotor Bay in Laštva Donja, Glagolitic codices written in cursive Glagolitic alphabet were also found.

[7] The oldest glagolitic register book in the Zadar area is the *Register of Baptisms from the island of Olib* (1565). Its facsimile and transliteration were published in the edition of the Permanent Exhibition of Religious Arts, in series Monumenta glagolitica Archidioecesis Iadertinae, vol IV / 1, Zadar, 2011. In the Zadar area, there was a Register of Baptisms from the island of Silba, which was few months older, but its original was lost.

[8] Pavao Kero, *Popis glagoljskih kodeksa zadarske nadbiskupije* (Zadar: Stalna izložba crkvene umjetnosti, 2008).

parishioners complied to the moral casuistic orders that bishop had regularly sent to them. Priests had to obey these rules. Thus, if a priest had to leave his parish for more than 24 hours, he had to find an adequate replacement who needed to be approved by the bishop. He had to teach religious education regularly, to hold services every Sunday, and stay with his mortally ill parishioners until they died. Furthermore, priests had to be decently dressed when visiting a bishop, wearing certain kinds of shoes (*na šotani kular*) and a hat *(klobuk)*. The same applied when they celebrated a mass, or went for a walk in Nin, and in villages. They were obligated not to neglect their daily duties, or work for wages, or to dig or plow. They had to refrain from drinking alcohol, making toasts and gambling. They had to keep accurate church records, particularly records concerning sacraments, services for the deceased, and paid tithes.

The following sins were often mentioned: swearing, desecration of the sacraments, incest (second cousins and in-laws), homosexuality, rape, living together before marriage, physically abusing parents, abortion or infanticide, falsification or destruction of documents (especially last Wills), perjury, and not paying tithes, not going to church, cheating on measures, and illegally reselling.

When composing each of these documents, the following people were usually involved: the author (*auktor* – Bishop of Nin), the recipients (*destinatarius* – in this case the priests of the Nin Diocese) and a scribe (*scriptor* – the bishop's chancellor). The recipients were required to sign a submission, which contained a date and place of receipt, as well as a signature in Latin and Glagolitic scripts (in Croatian) or in the Italian language. Sometimes it contained a note that was put on a church door, or read at mass.

Each of the documents was signed by the bishop, or sometimes by his chancellor, and had the bishop's seal on it.

The document was transcribed as many times as there were visitations to the villages, so it is not unusual to find several copies of the same document addressed to different priests and with different signatures. Although there are only a few of these documents preserved, there are sometimes extant two copies of the same document among these notices. Several copies of the bishop's orders sent to different villages can also be found in this fund.

After the document was written, it was sent to the recipient. Sometimes there were only a few copies transcribed, with a note to the priests to submit a signed notice to the neighboring village. In this case, copies *(kopijanje)*

were not made for every single village, but for a group of villages in the area.[9]

At the beginning of the document, we usually find INVOCATIO – invoking the name of God, and INTITULATIO (the title),[10] and then INSCRIPTIO – the addressee's name and title. At the end of the document is the closing, in the form of SALUTATIO.[11]

Since the Nin Diocese sources were written in the Glagolitic script, a few words will be said about these as well. The Glagolitic script was composed in the second half of the 11ᵗʰ century for the Slavic people in Moravia. It is a phonological script, which took over the voice system of the South Slavic language based on one of the Bulgarian-Macedonian dialects, which most likely came from the Thessaloniki region. In the paleographic and orthographic sense, the Glagolitic script in Croatia developed independently: from the 12ᵗʰ to 13ᵗʰ centuries the *angular Glagolitic style* was created.[12] In Croatia, the Glagolitic alphabet and Slavic liturgy had

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[9] The Archdiocesan Archives in Zadar, *The writings from Nin Diocese (glagolitica)*, box 1, file no. 3 and 4.

And so for you to know parishioners to celebrate confirmations on the Day of Pentecost in Nin, and this should be sent from Vir to Privlaka, from Privlaka to Zaton, from Zaton to Dračevac, from Dračevac to Polica, from Polica to Varhe, from Varhe back to Nin. And every priest has to sign this and it should be sent to every village .It should be in Privlaka on 17 May 1678 / in Vir on 19 May / In Polica May 1678 / In Varsi on 19 May 1678 / In Dračevac on 19 May 1678.

[10] The Archdiocesan Archives in Zadar, *The writings from Nin Diocese (glagolitica)*, box 1, file no. 3 and 4: Examples: *I, bishop of Nin .....; His Excellency and much respected Mr. Ivan Borgoforte by the grace of God, the Bishop of Nin*

[11] The Archdiocesan Archives in Zadar, *The writings from Nin Diocese (glagolitica)*, box 3, file no. 396: Example of the completion of the letter that was written to the bishop by a priest: *Your ever humble servant father Marko Kadia, on service in Nadin (15 June 1757).*

[12] The origin and genesis of the Glagolitic alphabet continues to be a subject of some debate. It is now generally accepted that it is an entirely new script and that it did not derive from any other systematic alphabet. It contains elements of oriental stylizations, and it was created by a talented philologist Constantine (later changed his name to Cyril), who was born in Thessalonika. The Glagolitic alphabet and Slavic liturgy took root in Moravia, Czech Republic, Pannonia, Bulgaria, Macedonia, Bosnia and Croatia. There is evidence that some religious texts in Russia were transcribed from the Glagolitic registers. In the 12th century, Glagolitic script was mainly abandoned in all of the countries - apart from Croatia. With the help of the Croatian glagolites it was used in Czech Republic in the 14th century. In 1390 Vladislav II. Jagiello invited Emmaus glagolites to Poland. He ordered the construction of the Monastery of the Holy Cross in Kleparz, the suburb of Krakow.

taken root very early on, and managed to hold on to the present day. Its beginnings are associated with the activities of Constantine's elder brother Methodius and his students. In the Croatian region, the Glagolitic script developed independently, and derived its name from the verb *glagoljati* meaning 'to speak', which was frequently used in Gospel texts. The Glagolitic graphic system has adapted to the modernized Croatian (mainly Čakavian dialect) phonological system, and the signs for the phonemes that have disappeared from the linguistic system are no longer used. In the last quarter of the 14th century, the *Semi – Ustav script* developed, which is a transitional script that led to the *cursive minuscule*. In the late 14th century, examples of *the cursive alphabet* appeared and developed into *book cursive* and *Glagolitic cursive office script.* From the middle of the 15th century to the middle of the 16th century, codices with educational and literary contents were mostly written in book cursive. Public and private letters and registers were mostly written in cursive office script (Nazor 2008, 15). This is why the writings from Nin were also written in cursive Glagolitic. Unlike the Glagolitic alphabet used in ecclesiastical missals, it is full of strokes, and is lively. This primarily derives from its purpose.

As a profane alphabet it had to be read and written quickly, and at the same time it had to be legible. That is why the signs had to differ sharply between one another, and all the word images had to be seen at a glance (Eckhardt 1955, 87). The need for fast writing led to the letters being written with the least number of strokes, preferably one, hence it very often broke the primary field, and the upper and lower fields were enriched with 'tails', twists, and even some unnecessary horizontal lines.[13] This resulted in prominent upper and lower lengths, on which the eye glides without stopping, at small individual forms in the central field.

It caused some structural changes as well. *Ustav script* had a two-stage letter scheme, because the hypothetical horizontal line 'broke' the main literal field of most letters.[14]

The Glagolitic alphabet was used there until the end of the 15th century. (Nazor 2008, 14).

[13] Mateo Žagar, „Usustavljivanje kurzivne glagoljice u XIV stoljeću" in *Vidjeti Ohrid / Referati hrvatskih sudionika za XIV. Međunarodni slavistički kongres*, ed. Biserka Petrović, and Marko Samardžija. (Zagreb: Hrvatsko filološko društvo, Hrvatska sveučilišna naklada, 2008), 158.

[14] Žagar, „Usustavljivanje kurzivne glagoljice u XIV stoljeću", 155.
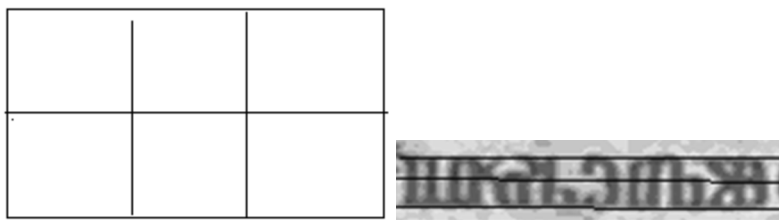
Figure 11-1. Glagolitic *Ustav script*

In contrast, the cursive script has lost the two-stage organization of the letters and the letter scheme of the cursive Glagolitic script looks like this:
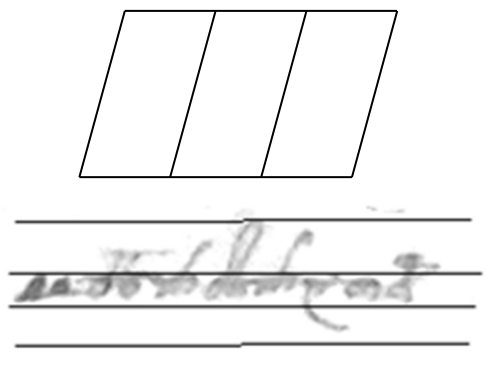
Figure 11-2. Glagolitic cursive script

This is, of course, the ideal presentation, because the scheme (module) does not have to be fulfilled in its full width, and a letter may fill only one-third of the module. We have already mentioned that the function of the exterior parts of a letter outside the central field contributes to its optimal discernment while being read. Letters that remain only in the central field are rarely found. On the other hand, in this scheme we can see that the letters slant to the right, which is also a characteristic of a quick script[15] single-stage letter, which is organized in the way that the horizontal lines are

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[15] Mateo Žagar, „Usustavljivanje kurzivne glagoljice u XIV stoljeću." In *Vidjeti Ohrid / Referati hrvatskih sudionika za XIV. Međunarodni slavistički* kongres, edited by Biserka Petrović, and Marko Samardžija (Zagreb: Hrvatsko filološko društvo, Hrvatska sveučilišna naklada, 2008), 157.

written only on the top or bottom of the main field, so that they do not 'break' the main literal field / scheme, module / lengthwise.

Each scribe was searching for the optimal ratio between the speed of writing and concern for the reception, so we can identify physiological, motor, and educational, features in each of the records of the same scribe.

When writing ¾, a scribe would not use the letter *jat* or *djerv* for the phoneme /j/, but would always use /i/ which could show the Italian influence. It is somewhat different in the writing (26/27) where the scribe used the graphemes *jat* and *djerv* for the phoneme /j/ within the same word. Furthermore, the scribe used the Glagolitic (*Ustav*) letter **u** in the writing ¾, while in the writing (26/27) a grapheme taken from the Croatian Cyrillic (*Bosanica*, *Bosančica*) was used for the phoneme /u/. In the writing 17, the letter *o* from the Latin alphabet was used. The phoneme ļ was written with jl, according to the Italian spelling. Some scribes used the grapheme *jus* for the phoneme /u/ or for the sequence of phonemes /ju/ J'ljubavlju (17). Graphemes **đerv** and **uk. o**r **jat** and **uk.** were sometimes used for this sequence of phonemes. The ligatures of letters p͡r, p͡o, o͡t were also very common.

In one of his works, Hercigonja wrote about "an ongoing coexistence, the intertwining of three scripts - Latin, Glagolitic and Croatian Cyrillic (Bosančica) - and three languages - Croatian, Latin, Old Slavic (by the end of the 11th century) / the Croatian Church Slavonic type (from the 12th to 16th centuries)" in Croatian literacy in the Middle Ages.[16]

This intertwining of the three alphabets can be found in old records. Father Bare Pifrović wrote in the Register of Baptisms from Petrčane:

> "I, Don Bare Pifrović, wrote this in Croatian, in Croatian Cyrillic and in Latin. I have never learned Latin in school, neither with the priests or friars, so I don't know it well. But thanks to the Lord Our Creator, I studied three Latin books when I was in my father's house because I wanted to learn it...".

At the end of the writing, the word 'Amen' appears in each of the three 'books' (alphabets): Latin alphabet, Croatian Cyrillic (Bosančica), and Glagolitic.[17] The Glagolitic alphabet and the Croatian language were used for numerous writings, such as: stone monuments (tombstones, epitaphs and inscriptions on churches and private homes); graffiti; documents and codices; registers (of baptisms, marriages and deaths); books of

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[16] Eduard Hercigonja, *Tropismena i trojezična kultura hrvatskoga srednjovjekovlja* (Zagreb: Matica hrvatska 2006), 8.
[17] The State Archives in Zadar, *Glagolitic Registers of Baptisms from Petrčane 1614-1794*., 63.

confirmations; books of souls; lists of the deceased; anagraphs; books of confraternities (*madrikule*); clerical accounting books; sermons; almanacs; rules of a religious order; medical records (*likaruše*); entreaties; mystery plays; court documents; records of the municipal administration; personal records; and ecclesiastical and other correspondence.

The uniqueness of these Glagolitic texts is reflected in the following:

1. They are proof that the Venetian, as well as the ecclesiastical, authorities used the Croatian language and the Glagolitic alphabet for official purposes.[18]
2. In these documents, the names of the villages are written in the Croatian language.[19]
3. We can find a large number of relevant documents useful for the study of everyday life.[20]

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[18] Particularly interesting is *Dragomani fund* from the State Archives in Zadar. Dragomani translated letters from Italian, Croatian, Turkish, and used several different scripts: Latin, Glagolitic, Bosančica and Arabic. HR-DAZD-2, Mletački dragoman 1597. – 1797.

[19] In the beginning, scientific and scholarly works were mainly written in Latin, but began to be translated into Croatian later on. Dadić states that the texts in Croatian language were important for two reasons. *"Firstly, they contained Croatian scientific terminology which largely influenced its later development, and secondly they showed the ways natural scientific ideas spread in all strata of the Croatian society ."* in Žarko Dadić, *Egzaktne znanosti hrvatskog srednjovjekovlja* (Zagreb: Globus 1982)

[20] There are various challenges when studying everyday life of common people in the past. The most important is the aforementioned lack of written sources, or in some cases, the fact that documents were not preserved. It must be taken into account that the majority of the population was illiterate or they were not aware of the importance of having written documents, and so everything was mainly based on oral tradition. It should be emphasized that lesser number of sources have been found regarding daily life in the hinterland or in communal districts, which caused stronger interest in studying everyday life in cities (confraternities, tradesmen, clergy, nobility and others). Numerous documents about the daily life of the rural population in the district of Zadar were found. Many of these documents are kept on the Zadar islands and were written in the Croatian language and in the Glagolitic alphabet. Most of the preserved documents came from the small villages on the islands which were safe from the Turkish attacks and they were not destroyed. On the other hand, there were priests who performed masses in Croatian (Glagolitic priests) i.e. in lingua Slauica and lived their lives like other villagers. At the same time they were more educated and informed than the rest of the population, and their role in the lives of the people as well as the great importance of written books and celebrations of religious ceremonies in Croatian, is worth studying. Burke states: *"These texts are rarely the work of tradesmen and peasants whose attitudes and values we want to*

The language used in the writings was customary for the coastal part of Croatia in the 17th and 18th centuries. This is a form of standard language which was not officially standardized, and its use was based on customs. Many linguistic characteristics typical of the Čakavian dialect can be found, but there is also an increasing number of language inputs that are more typical for the Štokavian dialect. The influence of the Italian language is also present. Among the linguistic features, the Ikavian, but also Ekavian reflex of *jat* can be emphasized: *navistiti* (28/9), *vrimena* (4) *grih* (PP), *telesno* (PP). We single out the devocalized /r/, with the accompanying vowel /a/: *parva* (3/4), *svarši* (3/4) *parvu* (3/4), *karšćane* (PP) *izvarši* (PP), *darže* (PP), *darži* (PP); *Varsi* (3/4). In other writings, /r/ is used, which could be the Štokavian influence: *države* (26/27); *crkve* (26/27) *Vrhe* (28/29). The /šć/ group is also present: *prošćiene* (3/4) *Skupšćine* (26/27), *karšćane* (PP), which can still be found in present day Čakavian . Often the /o/ is replaced with /u/: *kanune* (7/27). The letter l is sometimes kept or left out: *udil* (3/4); *reka* (4), or turns into –ja: z(n)aja, under the Štokavian influence. Secondary palatalization was not conducted so /jt/ and /jd/: *poiti* (3/4), *doido* (3/4) are left unchanged. Changes from /m/ to /n/ which were typical for all speech on the Croatian littoral at the time only began to be implemented. Examples with the ending -*m*: *karstisam* (3/4); *podpisanem* (3/4); *prilubeznivim* (26/27); *svitovnim* (26/27), *redovnikom* (26/27); *svetim* (26/27); *crikvenim* (PP); *pohodnikom* (PP), and also with -n: *glavaron* (4), *van* (36), *svin* (36), *parohianon* (36) are also present. Some typical Čakavian linguistic features, such as the prothetic /j/, are not recorded, only the examples *Ivan* (3/4), *ima, imati* (26/27) appear. Changes from /ę/ to /a/ before the phonemes j, č, ž…are also not found, but rather /e/ is solely used, as with *početi* (28/29), (4). Proto-Slavic and the Old Croatian declension systems were quite complex. Language development had a tendency to simplify the system, i.e., to reduce the number of declension types. This process took longer within the Čakavian dialects, so Čakavian speaking people use more forms of the

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reconstruct, so they are not approached directly, but through an intermediary." (Peter Burke, *Junaci, nitkovi i lude, narodna kultura predindustrijske Europe* (Zagreb: Školska knjiga 1991, 61). But the largest number of the Glagolitic documents were written by the Glagolitic priests and literate peasants (Archive of the Croatian Academy of Sciences and Arts; *Mate Šimoncin Puhov's Notebook, from the late 18th and early 19th centuries*), whose writings reflect the lives, way of thinking and feelings of the common people, as they were themselves. Therefore, they are very important for studying of daily life. They provide data that cannot be found in any of the documents written in the offices of rectors, governors, captains or bishops. On the other hand, Glagolitic documents also provide more information about rural life than documents written in Italian or Latin. Ordinary, everyday events that official authorities did not consider important, were described in them.

old declensions. This has also been reflected in the Čakavian stylization of the Croatian standard language and the language of the writings that we have studied. The best preserved example is the old form of the genitive plural with -ov endings like in *titulov* (28/29), *redov* (28/29) *obligov* (28/29) *diakov* (28/29) *hotnikov* (28/29), *procešionov* (PP), *superšcionov* (PP), *grišnikov* (PP), or without an ending - ø; *parok* (28/29), *mist* (28/29), *brašćin* (28/29) *svetac* (28/29). The dative plural also reflects the older forms, thus the ending -om in masculine nouns: *redovnikom* and *parohijanom* (4/5); and -am in feminine nouns: *dušam* (26/27), *crikvam* (28/29).

Shtokavian elements in the Čakavian language system can be clearly seen in the use of pronouns. Only the forms of the relative pronoun *što* are found in the writings. The contracted form of the interrogative pronoun *zač* (28/29), which is a Čakavian feature, can also be found. However, in the same writing, the Shtokavian form *zašto* (28/29) is also present. There is also a coexistence of the contracted forms of the relative pronoun *ki* (3/4) *ke* (26/27), but also *koi* (28/29), *koja* (28/29).

Due to the intense cultural and political relations, the Italian influence is reflected in the use of language lexicon, and its influence can be seen in other language aspects, too. This possibly happened because the bishop's scribes were sometimes Italians who did not learn the Croatian language properly. At the phonological level we can see many features from the phonology of the so-called Venetian dialect:[21] *odlucili* (36), *pocati* (36), *nase* (36), *dus* (36), *mišiona* (PP), *ošpiciona* (4), *prišašnoga* (26/27), *superšticionov* (PP), *svarši* (3/4), *š* (PP), *šošpeta* (PP), *višitu* (3/4), *višitaju* (3/4)[22]. However, this linguistic phenomenon is known in the dialectology literature as *Cakavizam*. In Cakavizam pronunciation we use *c* instead of the Čakavian *č*, *z* instead of *ž*, and *s* instead of *š*. There is also the use of *ź* instead of *ž* and *z*, and *ś* instead of *š* and *s*. Numerous linguists have written studies and articles on the problem of Cakavizam. Some assume that Cakavizam occurred under the influence of the prestigious Venetian dialect during Venetian dominion, while others consider it as the result of an

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[21] The Nin Diocese at that time was under the rule of Venice.

[22] The most noticeable features of this dialect are frequent realizations of the voice /ž/: *eležia, vižita,* and the voice /š/: *šošpeta*, *ošpiciona,* reduction of the last phoneme, and the use of pronoun *mi* (*mi go*), for the first person singular, as opposed to the standard Italian: *io*. This influence is visible in some formative ways. Suffix formation with the ending *–on superšticion*, *ošpricion* is very common.

internal language development. Some researchers attempted to unify these
two theories by adding a socio-linguistic dimension to the issue.[23]

On a morphological level, certain complex verb forms are formed
ostensibly according to the Italian model: *ima doiti naiti* (26/27), *ima imati*
(26/27), *početi činiti* (26/27), *ima početi* (4), *činiti učiniti* (26/27), *ima znati*
(28/29). However, this does not permit us to claim that the scribe was an
Italian, because the same verb constructions can also be found in the
writings of Croat scribes or notaries.[24]

The use of passive verb constructions in examples (3/4) *će se sveta*
krizma tišćati (26/27); *ki se imaju naiti* (27/28), *se ni edan nima diliti*
(28/29) is not typical for the Croatian language, making the influence of
Italian and Latin a probable cause. It can also be found within the group of
those Croatian writers who used Italian grammar. The above-mentioned
linguistic features, and also the frequent use of Italian lexemes, are, without
a doubt, largely influenced by the Italian language. However, the more
frequent use of such language features than in the writings of the Glagolitic
priests in parishes gives us the right to assume, but not to claim with
certainty, that the bishop's scribes were Italians. The exception is that when
the scribe signed the document, it can be seen by the first and last name that
he was a Venetian. Undeniable is the fact that the writings were in the
Croatian language.

The word order in the sentences is also in line with the scribal habits of
the period, and it was recorded that the attributes were put after the nouns
they qualify: *s krvju isukrstovom* (26/27), *redovnici naši* (28/29); *stvari*
svake (PP), *nedilu mimošanu* (3/4). Today, such word order would be
stylistically marked, but in the 17th and 18th centuries it was considered quite
common and stylistically neutral. Avoidance of the double negative *niedan*
ima se diliti (36) can be considered as a syntactic feature, which can also be
attributed to the influence of Italian.

The terminology used in ecclesiastical correspondence related to the
title of prelates: *biskup* (3/4), *pomoćnik biskupov* (26/27), *parohian* (3/4),
žakan (26/27); sacraments: *ispovid* (26/27), *pričešćenie* (PP), *kumunion*
(26/27), krizma (26/27); liturgical objects used while administering the

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[23] Milan Moguš, *Čakavsko narječje* (Zagreb: Školska knjiga, 1977), 66-79.; Josip
Hamm, „Iz problematike čakavskih govora / cakavizam i njegova geneza" *Radovi*
Instituta JAZU u Zadru, 3 (1957), 21-38.
[24] Almir Kapetanović, „Jezične značajke i leksikografska obrada fra Ivanove
Filomene iz XVII stoljeća," *Rasprave Instituta hrvatski jezik i književnost*, 29
(2003): 140 ; Boris Kuzmić, „Jezik hrvatskih pravnih tekstova, in *Povijest*
hrvatskoga jezika / 1. knjiga / Srednji vijek, ed. Josip Bratulić et al. (Zagreb :
Croatica. 2008), 341.

sacraments*: svića*, *bumbak, kurdela mahrama* (26/27); appointment of
ecclesiastical events: *procession* (PP), *prošćienie* (3/4); administrative
divisions of the ecclesiastical jurisdiction: *dioceži* (28/29), *daržava* (26/27)
sveto sidaliće (3/4) *Biskupia* (36), *parohija* (26/27); names of villages in the
Nin Diocese: *Vir, Privlaka, Zaton, Dračevac, Polica, Varhi, Vrhe, (Vrsi),
Novigrad, Obrovac, Kula Atlagića, Popovići, Kruševo, Posedarje, Budin,*[25]
Vinerac, Starigrad, Slivnica, Ražanac, Trstenica,[26] *Nin,* can also be found
in the lexis of the writings. Terms used in the ecclesiastical hierarchy: *vižita,*
(3/4) *pena* (3/4), *licenca* (26/27), *kanun* (26/27), *koncili* (26/27), *patenti od
beneficija* (PP); and words, or groups of words, which indicate a non-
Christian way of life: *užararia* (pp), *hotnik* (PP), *beštimanidur,* (PP),
zločinac (PP), *zaručnik koji razlučeno* (PP), *dilo of čarovnika* (PP), *stvar
diavolska* (PP) can also be found in the writings. Various religious
associations, like associations of secular brothers (and sisters), associations
of priests (monks), i.e., confraternities *(brašćine),* are also mentioned.

The file contains some expressions of polite communication:
Mnogopoštovanom i prilubeznivim (much respected and kind) (26/27),
Mnogo prisvitli i mnogo poštovani gospodin (His Excellency*)* (3/4),
pozdrav i blagoslov Isukrstov (greeting and blessing of Jesus Christ)
(28/29). A part of the lexicon used in ecclesiastical correspondence was
inherited from medieval Latin and sometimes through the Italian language.
However, there is also a part of the lexicon related to the Church and the
liturgy, which was inherited from the Slavic languages: *ispovid, prišešćenje,
skupšćina* (26/27), and there are also the words that derived from Latin, and
were sometimes used in Italian as well: *vižita* (3/4), *iženpij* (26/27), *pena
(26/27), kuminioni* (28/29). *Sidališće* is an interesting word (which is not in
general use today), meaning "the seat and a service of the bishop." This term
is the translation of the Greek word *kathédra*, in Latin *cathedra*.

Another feature of the old Croatian texts, including those from the 17th
and 18th centuries, is the use of contact synonyms. This phenomenon was
not present only in dictionaries, but also in all types of texts, including those
of ecclesiastical provenance. Contact synonyms are present in many organic
idioms (local idioms). They emerged from the need to make some lexemes
more understandable in other speaking areas, or in order, like the examples
from the writings, to make some terms more understandable: *uče li ih nauke
kršćanski ali ti vam dotrinu (28/29), notu ili pismo* (4), *pohonienie iliti vam
visita* (36).

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[25] Village in Zadar's hinterland. It no longer exists: there are many villages which
disappeared during or after the Turkish occupation. Sometimes their residents
moved out or the villages merged into one larger location.
[26] This village also no longer exists.

Conclusion

We have presented in this chapter a corpus analysis of eight documents from the archive fund called *The Writings of the Nin Diocese*, which is less known to the scholarly public. The documents in the fund date back to the time of bishop Mark (Marko) Loredano (1554-1577) and span until the abolishment of the diocese of Nin in 1828. It is a collection of manuscripts composed of orders, mainly correspondences between the episcopal curia and the parishes. They are written in Italian and Croatian languages, and in the Latin, Glagolitic, Cyrillic, and Bosanica scripts.

Moreover, we have analyzed the documents related to the beginnings of the bishopric visitations of parishes in the Nin diocese. These documents are important because they contain records with moral-theological provisions related to the lifestyle of parishioners, as well as clergy. From these documents we managed to reconstruct, at least to certain extent, their way of life, and the manners they used to 'model' the world, that is, how they interpreted the world at the time they were written.

Chancellors, presumably foreigners, often witnessed the contemporary development and problems that appeared in practice. We can observe from these sources that swearing, desecration of the sacraments, incest, rape, living together before marriage, physical abuse of parents, abortion, infanticide, cheating on measures, and illegal reselling, were, in that period, considered as common problems in the daily life of parishioners. The priests had to obey rules as well. They had to be decently dressed during the visitations, during the celebration of mass and when going for a walk in Nin. They had to refrain from drinking and gambling, and had to keep church books properly. The priests had to be present during the visitation, and needed to have all of the documents prepared, given that the bishop, aside from administering the sacrament of confirmation, had to examine the documentation of the parish and the moral state of the parishioners.

The letters were written according to well-established patterns that were common for ecclesiastical correspondence. Therefore, in them one can identify the author, the recipient, and the scribe. The recipient of the letter was obliged to sign it.

Since language and script are considered to be aspects of culture and to represent the picture of time, space, and people, who use them, in this chapter we have applied the linguistic analysis to complement the historical context.

The writings were written in the cursive Glagolitic script, and a series of specific graphic solutions can be noted: the use of different graphemes for the same phonemes, or the use of the same graphemes for different

phonemes. There is also the use of one or two graphemes for one phoneme. Also, the way of writing some palatals, which is typical for the Italian language, has been noted. In order to shorten the statements, ligatures and abbreviations were also frequently used.

The language used in the examined documents was customary for the coastal area of Croatia in the 17th and 18th centuries. This was a form of standard language with Čakavian stylization, and many elements of the Štokavian dialect.

At the phonological level, we can see many features from the phonology of the Venetian dialect i.e. Veneto. However, similar features are extant in the Čakavian dialects as well. The large distribution of words with such phonological features, as well as the Italian names and surnames of the chancellors, allow us to assume that the scribes used elements of their mother tongue in the writings.

On the morphological level, many words with the endings of the former declension systems remained. These features, as well as contracted forms of some pronouns, are characteristic of the Čakavian dialects.

The use of passive verb constructions, as well as avoidance of the double negative, can be attributed to the influence of the Latin language and Italian syntax. Attributes were usually put after the nouns they qualified.

The terminology used in ecclesiastical correspondence related to the titles of prelates, liturgical objects used while administering the sacraments, the appointment of ecclesiastical events, administrative divisions and words which indicate a non-Christian way of life are also unique. Besides the indigenous Croatian lexicon, many words and expressions derive from the Old Slavonic, Latin or Italian languages. Examples of contact synonyms are often found, in order to make documents more understandable.

By analysing historical, cultural and linguistic data from mentioned sources related to episcopal visitations of parishes in the Nin Diocese, we tried to improve our knowledge regarding the life of the inhabitants of the Nin Diocese in the 17th and 18th centuries.

Appendices

1.The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), Nin, box 2, No.17

(paper, 20.3 x 28.6 cm, one sheet, no stamp mark, the cursive Glagolitic, bishop's signature written in the Latin alphabet, dating in the Bosančica alphabet and Arabic numerals, back side is empty).

Contents:

Martin Dragolović, the Bishop of Nin, on 18 April 1704 announced his visitation which began on the first day of May.

Figure 11-3. The writings from Nin Diocese (glagolitica), Nin, The Archdiocesan Archives in Zadar, box 2, No. 17

2.The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), Nin, box 1, 3/4, (paper, 20 x 29.7cm, two sheets, stamp mark in the lower left corner, the cursive Glagolitic, bishop's signature written in the Latin alphabet, a list of villages on page 4, written in the Latin alphabet)

Contents:

Ivan Borgoforte, the Bishop of Nin, announced on 17 May 1678 his visitation, which began on May 22. In addition, he announced a parish fête on Sunday, May 22. Priests were bound to announce confirmations on the Day of Pentecost in Nin.
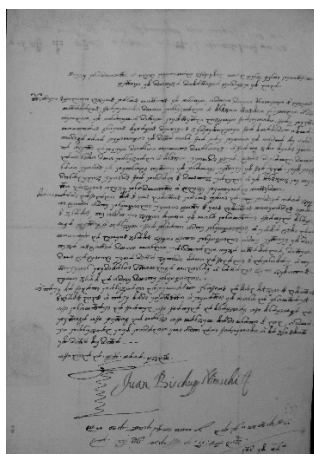
Figure 11-4. The writings from Nin Diocese (glagolitica), Nin, The Archdiocesan Archives in Zadar, box 1, No. 3/4

3.The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), box 1, 26/27

(paper, 20.5 x 28.8cm, two sheets, stamp mark in the middle of the second page, the cursive Glagolitic, bishop's signature written in the Latin alphabet, a list of villages on page 4, written in the Latin alphabet)

Contents:

Ivan Borgoforte, the Bishop of Nin, announced in his letter from 23 April 1684 his visitation, which took place on 15 May. He estimated the state and activities of the parish and administered the sacrament of confirmation. He also prescribed the behaviour of the priests during and after his visitation.
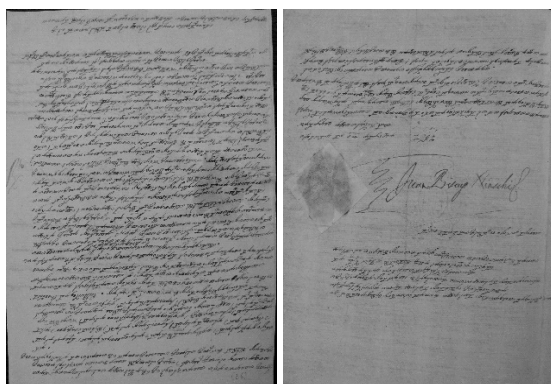
Figure 11-5. The writings from Nin Diocese (glagolitica), The Archdiocesan Archives in Zadar, box 1, No. 26/27

4.The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), box 1, No. 36

(paper, 21 x 28.3cm, one sheet, stamp mark in the middle of the second page, the cursive Glagolitic, bishop's signature written in the Latin alphabet, list of villages on page 2, written in the Latin alphabet)

Contents:

Jurai Parčić, the Bishop of Nin, sent a notice on March 20, announcing his visitation. The rectors had to prepare all permits, letters, inventories and other necessary documents.
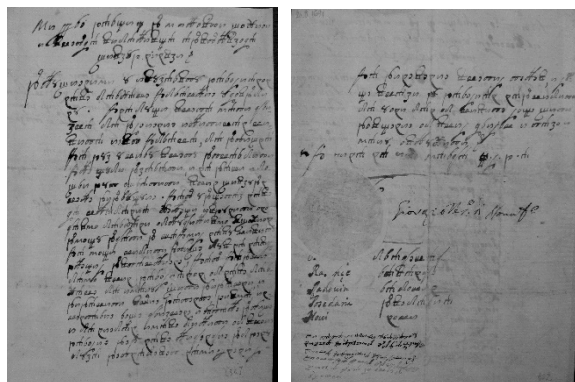
Figure 11-6. The writings from Nin Diocese (glagolitica), The Archdiocesan Archives in Zadar, box 1, No. 36

5.The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), box 1, No.90

(paper, 20.7 x 29.2cm, one sheet, stamp mark in the lower left corner, cursive Glagolitic, bishop's signature written in the Latin alphabet, back side is empty)

Contents:

Jurai Parčić, the Bishop of Nin, in his letter from 27 April 1700, announced his visitation. Priests had to proclaim it a non-working day, and they also had to prepare children for confirmation
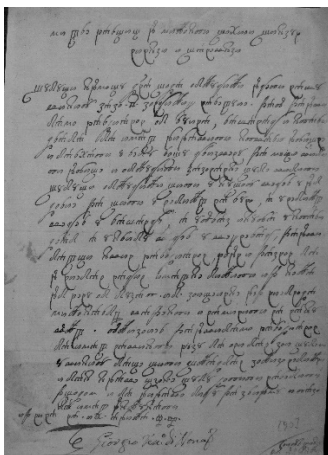
Figure 11-7. The writings from Nin Diocese (glagolitica), The Archdiocesan Archives in Zadar, box 1, No. 90

6. The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), box 1, No.2a

Paper, 29.5 x 40.6cm, one sheet, left edge of the paper is damaged, clearly visible (preserved) stamp, 5cm in diameter, in the lower left corner of the front page + *GEORGIVS PARCHICH*EPISCOPVS*NONEN is written. There is a Bishop's hat held by the angels, and a shield with a star and crescent on the top of the page. Cursive Glagolitic, Bishop's signature is written in the Latin alphabet.

Contents:

Jurai Parčić, the Bishop of Nin, sent a notice on April 20 1694 announcing his visitation in order to estimate the activities of the parish and administer the holy sacrament of confirmation. In addition, he also announced a parish fête on Sunday May 22. The parish priests were obliged to announce confirmations on the Day of the Pentecost in Nin. The bishop asked the parishioners to pray at the altar of the Holy Sacrament and to hold a procession. The parish priests and other clergy had to prepare all the permits, lists of goods and ecclesiastical relics, books, lists of parish fêtes, a list of churches and chapels, a list of clerics, confraternities, lists of all those who committed major sins (e.g., people who engage in sorcery or possess banned books, people who do not confess, those who curse, criminals or people who live together before marriage, etc.).
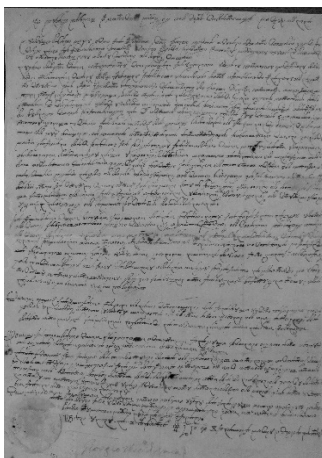
Figure 11-8. The writings from Nin Diocese (glagolitica), The Archdiocesan Archives in Zadar, box 1, No. 2a

7.The Archdiocesan Archives in Zadar, The writings from Nin Diocese (glagolitica), box 3, No.4

(paper, 19.8 x 28.5cm, one sheet, no stamp, cursive Glagolitic, bishop's and chancellor's signatures written in the Latin alphabet, a list of villages written in Italian and in the Latin alphabet, a receipt written in Bosanica script)

Contents:

Ivan Borgoforte, the Bishop of Nin, in his letter of May 14, 1707, announced his visitation to estimate the activities of the parish and to administer the holy sacrament of confirmation. The rectors had to prepare all the permits and lists, and those who had committed the major sins were obliged to give alms.
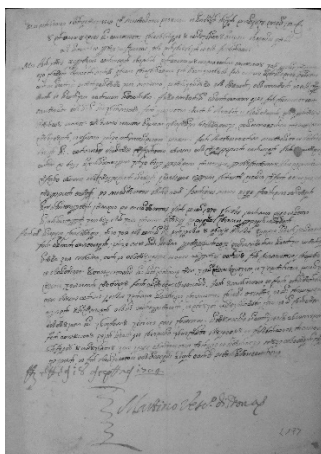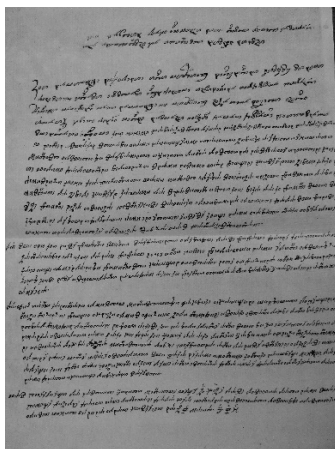

Figure 11-9. The writings from Nin Diocese (glagolitica), The Archdiocesan Archives in Zadar, box 3, No. 4

Sources:
The Archdiocesan Archives in Zadar
Funds:
The writings from Nin Diocese (glagolitica), box 1-5
Vizitacije ninske biskupije (Visitations of the Nin Diocese) vol. 1-3;
Vizitacije Zadarske nadbiskupije (Visitations of the Zadar Archdiocese)*, vol. 1-3;

The State Archives in Zadar.
Glagoljska matica krštenih, Olib, 1565-1613. (Glagolitic Register of Baptisms from Olib 1565-1613).
Glagoljske matice krštenih Petrčane 1614 – 1794. (Glagolitic Registers of Baptisms from Petrčane 1614-1794).
HR-DAZD-2, Fund: *Mletački dragoman 1597 - 1797*

Archive of the Croatian Academy of Sciences and Arts
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Kuzmić, Boris. Jezik hrvatskih pravnih tekstova, in J. Bratulić et al. *Povijest hrvatskoga jezika / 1. knjiga / Srednji vijek*, ed. Josip Bratulić et al., 325-385. Zagreb: Croatica, 2008.

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CHAPTER 12

THE PROBLEM OF TITLES OF MEDIEVAL NOTARIAL RECORDS

ANITA BARTULOVIĆ

Abstract

The title represents the first contact with the text, and should offer concise information about its subject or content. But can titles of medieval notary records be completely trusted? In this chapter, the variety of titles of notarial deeds, as well as the reasons for title variation, is explored, and the problem of notarial deeds in whose titles the synonymous stems *refuta-* and *repudia-* appear is particularly highlighted. The records of seven Zadar notaries, published in five volumes of series *Spisi zadarskih bilježnika*, covering the period from 1279 to 1356, as well as the unpublished records of the Zadar notary Petrus, called Perençanus from Padua (1365-92), were compared in a diachronic and synchronic analysis. The investigation into the problems of titles can serve as a guideline for how to facilitate the classification of notarial deeds in future digital editions of unpublished and reprinted notary records in cases where the title insufficiently refers to a particular type of contract or document for various reasons.

Keywords: Middle Ages, Zadar, notary deeds, *Spisi zadarskih bilježnika I–V* [Records of the Notaries of Zadar I–V], notary Petrus called Perençanus

Introduction

The variation in the naming of certain notarial deeds[1] was highlighted in the monograph on the medieval notarial register of the Zadar notary Petrus, called Perençanus, son of the late Mr. Azon de Lemicetis from Padua (1365-92).[2] In the diplomatic analysis, the following groups of deeds were set apart: within the notarial deeds recording permanent transfers of ownership, purchase contracts and contracts for the repurchase of purchased things; within the locations, contracts of lease of real estate and movable property as well as employment contracts; within the debentures, requests for termination of statute of limitations; within the quitclaims, general quitclaims as well as quitclaims (later called disclaimers) related to the renunciation of inheritance; within the settlements, various agreements and contracts on associations; and finally within deeds relating to inheritance, oral and written wills, and statements on rejection of inheritance.[3]

However, the problem of titles has to be further investigated by a comparative method. As it is a complex problem, specific for each of the abovementioned types of notarial deeds, this chapter focuses on several things. Based on the records of seven notaries of Zadar, published in the series *Spisi zadarskih bilježnika I – V*,[4] and the unpublished records of the said notary Perençanus, the diachronic and synchronic development of the way in which the notary deeds were named is traced, and the reasons for the variation of their titles, as well as why special titles were given to

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[1] For the division of medieval notarial deeds, see Branka Grbavac, *Notarijat na istočnojadranskoj obali od druge polovice 12. do kraja 14. stoljeća* (Zagreb: PhDiss., Sveučilište u Zagrebu, 2010), 84-9.

[2] Anita Bartulović, *Paleografska, diplomatička i filološka analiza spisa zadarskoga bilježnika Petra Perencana (1361.-1392.)* (Zagreb: PhDiss., Sveučilište u Zagrebu, 2014) (hereafter: *PDFA*)

[3] See Bartulović, *PDFA*, 76, 83-4, 90-2, 103, 109, 115, 118, 134-6, 143, 150-1.

[4] Mirko Zjačić, (ed.), *Spisi zadarskih bilježnika Henrika i Creste Tarallo 1279.-1308. Spisi zadarskih bilježnika*, vol. I (hereafter: *SZB I*), (Zadar: Državni arhiv u Zadru (hereafter: DAZD), 1959); Jakov Stipišić and Mirko Zjačić, eds., *Spisi zadarskih bilježnika Ivana de Qualis Nikole pokojnog Ivana Gerarda iz Padove 1296 ... 1337. Spisi zadarskih bilježnika*, vol. II (hereafter: *SZB II*) (Zadar: DAZD, 1969); Jakov Stipišić, (ed.), *Spisi zadarskog bilježnika Franje Manfreda de Surdis iz Piacenze 1349.-1350. Spisi zadarskih bilježnika*, vol. III (hereafter: *SZB III*) (Zadar: Historijski arhiv Zadar, 1977); Robert Leljak and Josip Kolanović, (eds.), *Andreas condam Petri de Canturio 1353-1355.* vol. 1 (hereafter: *SZB IV*) (Zadar: DAZD, 2001); Robert Leljak and Josip Kolanović, (eds.), *Andreas condam Petri de Canturio 1355-1356.,* vol. 2 (hereafter: *SZB V*) (Zadar: DAZD, 2003).

certain deeds within identical legal business, are determined. A special problem are the titles containing the synonymous stems *refuta-* and *repudia-*, because they sometimes inadequately label different kinds of notarial deeds. Although these stems have the same meaning of 'refusal', 'refuse', 'rejection', 'reject' in both nouns and verbs,[5] in legal documents these terms have to be used in a strict terminological sense, either as 'disclaimer (renunciation)' or as 'rejection', depending on whether we are dealing with contracts or statements. Thus, the proper use of legal terminology in abstracts, and indices of terms in digital editions of unpublished archival sources can eliminate the confusion which can arise from different variants of titles referring to the same legal business in medieval notary practice.

How notary deeds are named

A diachronic comparison of the published and unpublished notarial records of the Zadar municipality from the 1280s until 1392 has shown a tendency to an increase in more substantial titles of notary deeds, as can be seen from Table 12-1.

Furthermore, from the table, it can be seen that the ratios of deeds, with and without titles, are different for the first six notaries. The reason for the high percentage of untitled deeds can be partly attributed to the fact that the records have sustained significant damage, and this also applies to 8 percent of Perençanus's registry.[6] A different ratio can also be noticed among titled deeds, where those which have the type of legal business explicitly mentioned need to be distinguished from those which mention only the name of the client.

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[5] The dictionaries, Mirko Divković, *Latinsko-hrvatski rječnik* [Latin-Croatian Dictionary] (1900; rpt. Bjelovar: Dunja, 2006) and Jozo Marević, *Latinsko-hrvatski enciklopedijski rječnik* [Latin-Croatian Encyclopaedic Dictionary], 2 vols. (Velika Gorica: Marka, 2000), give the following meanings for: *refutare* suzbiti, odbiti, odbaciti, odbijati, ne mariti za što, opovrgavati, pobijati [refute, refuse, reject, oppose, repudiate, counter, contend]; *refutatio, onis, f* opovrgavanje, pobijanje, odbijanje, odbacivanje [refutation, rebuttal, rejection, confutation]; *repudiare* odbijati, odbacivati, posve odbaciti, ne prihvaćati, zazirati [repudiate, dismiss, renounce, spurn, deflect]; *repudiatio, onis, f* odbijanje, odbacivanje, neprihvaćanje [rejection, dismissal, repudiation].

[6] On the degree of damage to individual notary records, see the prefaces of published editions and Bartulović, *PDFA*, 21-2.

Table 12-1. Ratio of deeds in the registers of Zadar notaries from 1279 to 1392

Notary	No. of deeds	Deeds without titles	Deeds with titles	Only the name of the client in the title	Legal business in the title / No. of types of deeds
Henricus (1279-305)	211	150 (71%)	61 (29%)	35 (57%)	26 (43%) / 2
Creste Tarallo (1289-90)	285	27 (9%)	258 (91%)	188 (73%)	70 (27%) / 7
Iohannes de Qualis (1296-308)	168	86 (51%)	82 (49%)	0	82 (100%) / 1
Nikola condam Iohannis (1317-20)	244	96 (39%)	148 (61%)	144 (97%)	4 (3%) / 2
Gerardus de Padua (1329-31, 1336-7)	89	73 (82%)	16 (18%)	2 (12,5%)	14 (87,5%) / 2
Franciscus de Surdis (1349-50)	270	12 (5%)	258 (95%)	213 (83%)	45 (17%) / 15
Andreas de Canturio (1353-6)	712	0	712 (100%)	187 (26%)	525 (74%) / 31
Petrus Perençanus de Padua (1365-92)	c. 4983	417 (8%)	4566 (92%)	57 (1%)	4509 (99%) / 44

The titles of the deeds from the first six notary registers (except that of Iohannes de Qualis, containing only wills, which can be seen from their titles) are very simple, containing mostly the names of the clients, for example,

Carta Iuani de Cernucho (Henricus)[7]
Dragoscio filio Radune (Creste Tarallo)[8]
Dominici Sula de Pago (CT)[9]

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[7] *SZB I*, 3.
[8] Ibid., 103.
[9] Ibid., 102.

Pro Diminosi [*auo R*]*adoii* (Nicola condam Iohannis)[10]
Instrumentum Crisii de Gramaça (Gerardus de Padua)[11]
Petri de Petraca (Franciscus de Surdis)[12]
Bituli de Bite emphiteusis (FS)[13]
Andree marangoni pro comissaria (FS).[14]

Individual notaries differ from each other by the way they name the deeds in their registers. Henricus always uses the noun *Carta* + the name of the client in the genitive case in his titles, while Gerardus from Padua, according to what survived of the titles of his deeds, uses the noun *Instrumentum* + the possessive genitive.[15] The other notaries omit these nouns, most often mentioning only the name in the genitive case (Creste Tarallo, Franciscus de Surdis), in the dative case (Creste Tarallo) or in the ablative case with the preposition *pro* (Nicola condam Iohannis). Franciscus de Surdis occasionally extends the title with the name of the other contracting party in the dative case, or in the prepositional phrase with the preposition *pro*.

The titles of the deeds from the first six notary registers also rarely mention the type of legal business they contain. When it comes to Wills, almost all notaries (with the exception of Nicola condam Iohannis in whose register no Wills survive) normally note that the deed is a Will in the title (*Testamentum* + the person's name in the genitive case).[16] In addition to Wills, they sometimes mention the legal business, which was not a frequent subject of contracts,[17] and in the notary records of Creste Tarallo, court rulings can also be found.[18] Thus, some notaries also label:

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[10] *SZB II*, 97.
[11] Ibid., 214.
[12] *SZB III*, 3.
[13] Ibid., 122.
[14] Ibid., 118.
[15] For the terms *carta* and *instrumentum*, see Grbavac, *Notarijat*" 82-3.
[16] See the references for wills in the Index rerum for *SZB I-III*.
[17] Compare the ratio of the types of notary deeds mentioned in the titles in notes 19-28 and 31-33 with the ratio of key terms in the Index rerum for *SZB I-III* which can be found in deeds in whose titles types of legal business are not mentioned.
[18] *SZB I*, 98-9, 99-100, 106-7, 110, 110-1, 111-2, 113-4, 114, 117-8, 119, 121-2, 122, 122-3, 123-4, 124-5, 126-7, 129-30, 131-2, 133-4, 136-7, 141-3, 151-2,152-3, 164-5, 176-7, 181-2, 217-9. The reason why court rulings were noted in the notary registry can be found in Tomislav Popić, *Krojenje pravde. Zadarsko sudstvo u srednjem vijeku (1358.-1458.)* [Tailoring Justice. Zadar's Judiciary in the Middle Ages (1358.-1458.)]. (Zagreb: Plejada, 2014), 33-4.

– codicils–*Codicillus* (H)[19]
– quitclaims–*Securitas* (CT, FS) / *Carta securitatis* (CT);[20] *Fines*,[21] *Refutatio* (FS)[22]
– appointments of:
• procurators–*Comissio* (CT);[23] *Procuracio / Pro… procuratore* (N);[24] *Procura / Procuratio* (FS)[25]
• replacement procurator–*Substitutio* (FS)[26]
• arbitrators–*Compromissum* (N, FS)[27]
• syndics–*Carta sindicatus* (GP, FS)[28]
• executors of wills–*Electio comissarii* (FS)[29]
– certificate–*Presentationis denarii* (CT)[30]
– divisions–*Carta diuisionis* (CT)[31]
– release of maid–*Carta libertatis* (CT)[32]
– giving of dowry–*Carta dotis / Dotis / Dos* (FS)[33]
– agreements–*Pacta* (FS)[34]
– lodging of complaint–*Protestatio* (FS)[35]
– exchange–*Permutatio* (FS)[36]
– transfer of rights–*Cessio et vigor et robor* (FS)[37]
– returning of purchased items–*Retradicio* (FS).[38]

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[19] Ibid., 51.
[20] Ibid., 105-6, 130, 157, 157-8, 158, 168, 170, 172-3, 178, SZB III, 21-2 (*Securitas*), SZB I, 140 (*Carta securitatis*).
[21] *SZB III*, 83-4.
[22] Ibid., 33-4.
[23] *SZB I*, 102, 138, 144, 167-8, 170, 207, 207-8.
[24] *SZB II*, 127-8, 181-2 (*Procuracio*), 174 (*Pro… procuratore*).
[25] *SZB III*, 36-8, 42-3 (*Procura*), 40-1, 49-50, 63, 121, 134-5, 154, 162, 163, 166, 168, 174, 177, 180 (*Procuratio*).
[26] Ibid., 175.
[27] *SZB II*, 101-2; *SZB III*, 58-9, 179-80.
[28] *SZB II*, 244-6; *SZB III*, 116-7.
[29] *SZB III*, 68.
[30] *SZB I*, 139.
[31] Ibid., 146, 202-3, 204.
[32] Ibid., 182-3.
[33] *SZB III*, 11, 57, 72, 83, 103, 106, 125, 151 (*Carta dotis*), 14 (*Dotis*), 144 (*Dos*).
[34] Ibid., 17, 104, 140.
[35] Ibid., 20.
[36] Ibid., 51-3.
[37] Ibid., 22-3.
[38] Ibid., 126-8.

Andreas from Cantù and Perençanus were far less likely to fail to provide the label of the type of notarial deed in the titles compared to the older notaries, and thus they recorded significantly more types of deeds. Together with the indication of the type of notary deed, variation in the titles can also be detected. On the one hand, this can be observed quantitatively, given the amount of information contained in the title itself (type of deed, names of all parties, subject of legal business, description of the subject of legal business, time limit for legal business), like, for example;

> *Refutatio* (FS)[39]
> *Protestatio abbatis sancti Grisogoni contra fratrem Iacobum* (FS)[40]
> *Promissio retrovendendi medietatem XXIIII salinarum facta ser Petro de Vale et Michovilo* (AC)[41]
> *Pro Zacharia de Curzola emptio unius barche* (AC)[42]
> *Carta locationis ad laborandum vnam peciam terre ser Miche de Pichiaro hinc ad X annos* (PP).[43]

On the other hand, variation can also be observed in the use of synonyms. Thus, some notaries use various synonyms for the same type of deed. Andreas from Cantù, for example, an agreement on serving on a galley records at one point as *promissio*, and then later as *pacta*.[44] The words *promissio* and *pactum*, though not synonymous, belong to the same semantic field as related terms, and are connected with the fulfilment of an action expected in the future. Furthermore, Perençanus labels contracts of lease as *Carta affictationis* / *C. locationis* / *C. concessionis*,[45] and agreements as *Carta conuentionis* / *C. compositionis* / *C. pactorum*.[46] But another problem

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[39] Ibid., 33.
[40] Ibid., 20.
[41] *SZB IV*, 256-8.
[42] *SZB V*, 194-5.
[43] Hrvatska. Državni arhiv u Zadru, Zadar–fond 31–Bilježnici Zadra, Petrus Perençanus (hereafter: *PP*), b. I, fasc. 5, fol. 12r-12v.
[44] *SZB IV*, 381-2 (*Promissio eundi in galleam…*), 483-4 (*Pacta eundi in galleam…*).
[45] E.g., *PP*, b. I, fasc. 3, fol. 25r (*Carta affictationis vnius domus…*), fol. 10r-10v (*Carta concessionis hinc ad XXVIIII annos*), fasc. 6, fol. 5v (*Carta locationis et affictus vnius domus…*).
[46] E.g., *PP*, b. I, fasc. 8, fol. 23v-24r (*Carta conuentionis inter comissarios condam ser Rambaldini et dominam Mariçam, relictam condam dicti ser Rambaldini*), fasc. 10, fol. 21r-21v (*Carta compositionis inter dominam Maricam et comissarios ser Rambaldini*), fasc. 14, fol. 30v (*Carta pactorum inter magistrum Iohannem dictum Buçeç et Cresulum Piçolo*).

appears in the last group of contracts,[47] namely, contracts about associations of labour and assets. These contracts (*Carta societatis*) are often concealed under the title of *Carta compositionis* and *Carta pactorum*, and contracts about trading associations (*Carta colegancie et debiti*), under the title *Carta societatis*.[48]

The variation in the use of synonyms is further complicated by the fact that the notaries label the same type of deed differently, or add their own variants to the title, for example, in the case of:

quitclaims:
        Carta securitatis (CT)
Finis / Carta finis, *Remissio*, *Securitas*, *Quietatio* (AC)[49]
procurations:
        Comissio (CT)
        Procuratio, *Carta procurationis*, *Procura* (others)
   contracts for the repurchases of purchased item:
        Retradicio (FS)
        Carta restitutionis (*PP*).[50]

Titles of notary deeds with the stems *refuta-* and *repudia-*

The variants of the titles mentioned thus far belong to one type of contract, but this is not the case with the titles containing the synonymous stems *refuta-* and *repudia-*. The titles with these stems can refer to three types of notary deeds. Sometimes the type of deed cannot be established easily from the syntactic pattern of the title, especially in titles from the early period of the notary's career, which differ from those of the later periods (most noticeable in Perençanus) when they acquire their fixed form. This can be seen from the following titles taken from the notary records and arranged chronologically according to the use of a particular synonym in individual groups of deeds (Table 12-2):

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[47] A comparative analysis of contracts with the titles *Carta conuentionis/compositionis/pactorum*, *Carta societatis*, *Carta colegancie*, which belong to the group of contracts on agreements and associations, will not be made here, since this is a complex issue that requires special attention. On the problems connected with these contracts in Perençanus's register, see Bartulović, *PDFA*, 140-2.

[48] Bartulović, *PDFA*, 140.

[49] E.g., *SZB IV*, 27-8, 45-7 (*Finis*); 163-4 (*Carta finis*); 147-8, 304-5 (*Remissio*); 213-4, 236, 250-1 (*Quietatio*); 544-6 (*Securitas seu quietatio*), 546-7 (*Securitas*).

[50] *PP*, b. I, fasc. 6, fol. 6r-6v, 11v-12r, 13v-14r etc.

Table 12-2. List of deeds from notary registers which contain the stems *refuta-* and *repudia-* in the title

	Titles of deeds with the stems *refuta-* and *repudia-*	Source[51]
I.	1. Carta pactorum repudiationis hereditatis paterne et materne	*PP*, I, 4, 27v-28r
	2. Carta \<promissionis> repudiandi hereditatem et bona paterna et maternal	*PP*, I, 9, 31r-31v
	3. Promissio faciendi [reffutare] Mariçam bona paterna et materna	*PP*, I, 11, 15r
	4. Carta promissionis reffutandi bona paterna et materna	*PP*, I, 14, 26r-26v
	5. Carta \<promissionis> faciendi refutare Dobram bona paterna condam Rigucii	*PP*, I, 17, 2v
II.[52]	1. Repudiatio bonorum maternorum facta Iohanni de Parma	*SZB IV*, 481-2
	2. Carta finis repudiandi bona paterna et materna ser Blaxii de Soppe	*PP*, I, 14, 4r-4v
	Cf. Carta finis bonorum paternorum et maternorum facta per dominam Mariam ser Miche de Rosa patri suo	*PP*, I, 5, 16r-16v
	3. Refutatio	*SZB III*, 33-4
	Cf. Fines	*SZB III*, 83-4
	4. Reffutatio bonorum maternorum[53]	*PP*, II, 1, 8r-8v

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[51] Abbreviations b., fasc., fol. for *PP* have not been included in the table.

[52] Two disclaimers from 1381 which did not survive in Perençanus's register should be added to this group of disclaimers. They were published in Tadija Smičiklas et al. (ed.), *Codex diplomaticus Regni Croatie, Dalmatiae et Slavoniae* (hereafter: *CD*) (Zagreb: JAZU, 1976), vol. XVI, 180-2, 203-5. The contents of those disclaimers, which were probably titled *Refutatio*, can be found on the parchments kept in the convent of St. Mary in Zadar and the State Archives in Zadar. At the back of the parchment from the State Archives in Zadar, the title *Reffutatio bonorum paternorum [facta] per dominam Mariçam …*, which is not listed in the *CD*, was written by an unknown person and can barely be made out (Hrvatska. DAZD–Općina Zadar, Pergamenae notariles, no. 51).

[53] From the content of the disposition, it is obvious that the title was not finished because the woman also disclaimed her father's possessions. The reason for this may be that this disclaimer is not a customary one. Namely, the daughter's renunciation of her mother's possession was to be conditional if her mother were to die without a will, and her husband also promised her mother that he would not make any claims to his wife's inheritance from her father.

	5. [Reffutatio bonorum paternorum et maternorum facta per dominam Philippam ser Iacobo de Çadulinis patri suo]	PP, II, 1, 32v–33r
	6. Refutationis b. p. et m. facte per Ielenam Milese patri suo	PP, II, 4, 42r–42v
	7. Refutationis b. p. et m. facte per dominam Marchetam fratribus suis	PP, II, 7, 35r–35v
	8. Refutationis b. p. et m. facte per dominam Nicolotam fratri suo	PP, II, 8, 22v–23r
	9. Refutationis b. p. et m. [Thomaxine]	PP, III, 2, 47r–47v
	10. Refutationis b. p. et m. [Marice]	PP, III, 4, 13r
	11. Refutationis b. p. et m. [Chatarine]	PP, III, 6, 21r
IIIa.	1. Carta repudiationis hereditatis	PP, I, 4, 14v
	2. Carta repudiationis hereditatis paterne Pauli condam Nicolay Boni	PP, I, 8, 27v
	3. Carta repudiationis bonorum patris Luce peliparii	PP, I, 13, 22v
	4. [<C. repudiationis hereditatis paterne heredum Petri dicti Perusa>][54]	PP, I, 17, 38v
IIIb.	1. Repudiatio comissarie	PP, I, 8, 4r
	2. Carta reffutationis comissarie Iacobi de Cicono	PP, II, 11, 44r
	3. Carta reffutationis comissarie Gregorii condam Mathey	PP, II, 12, 6r
	Cf. Renuntiatio Nichole de Zadulinis	SZB IV, 530–1

Although only two titles with these stems have been recorded in the older notary records, and all remaining ones are from the Perençanus's registry, this does not mean that there are no deeds on the renunciation or rejection of inheritance among deeds without a title, or with a title containing only the name of the client, or with a title containing a third term (*finis* or *renuntiatio*). More on that later.

Since in all groups of deeds there is variation between the stems *refuta-* and *repudia-*, one could easily make the mistake that one was dealing with two types of deeds, if one would only take into account the different syntactic patterns of the titles marked by the use of the gerund (with or without *pactum* or *promissio*) or the noun *refutatio* and *repudiatio*. But

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[54] A completely damaged title reconstructed by analogy according to the preserved templates.

given the different dispositions,[55] the deeds can belong to one of three different groups, namely promises, quitclaims, or statements related to inheritance. Statements may also relate to the testator's instructions.

Promises to renounce one's inheritance

The titles of the first group of deeds are mostly marked by the use of gerunds in the genitive case, while in the titles of the other two groups the gerund is not used (with the exception of *Carta finis repudiandi*, where the word *finis* appears in a superior syntactic role). The objects (nouns in the accusative case or *accusativus cum infinitivo*) with gerunds[56] in the titles indicate the subject of legal work, i.e. a promise to renounce the father's and/or mother's possessions.

Furthermore, in two out of the five titles, the words *promissio* or *pactum* have been omitted, apparently by analogy. In relation to these

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[55] In the literature, there are different divisions of the diplomatic structure of deeds depending on whether the document in question is a public or a private legal deed (see Jakov Stipišić, *Pomoćne povijesne znanosti u teoriji i praksi* (hereafter: *PPZ*) (Zagreb: Školska knjiga, 1991), 150-3; Grbavac, *Notarijat*, 86-9, 98-320). Stipišić deals with public and Grbavac private legal deeds. Both authors follow the classic division of deeds into three main parts (the protocol, the text/corpus and the eschatocol). Disregarding the differences in the structure of the protocol and the eschatocol here, attention is directed to the structure of the text of deed that the authors put forward. According to Stipišić, the following formulae can be distinguished in the text of the deed: the arenga, the promulgation, the narration, the disposition, *clausulae finales*, the sanction and the corroboration. According to Grbavac, depending on the type of notary deed, the following formulae can be distinguished: *contrahentes*, *res*, *pretium*, *traditio rei*, *promissio*, *pena*, *renuntiatio*, *refectio damnorum et expensarum*, *obligatio bonorum* etc. Since the disposition is "considering the legal act the most important part of the deed because it contains the material or moral object to be given to the intended recipient" (Stipišić *PPZ*, 151), regardless of whether it is a public or private legal deed, it would therefore be equivalent to the formula *contrahentes* with or without the formula *res*, so these terms will be used in this sense in this chapter. According to Grbavac, the formula *contrahentes* makes up the first formula of the main part of the notarial deed, and it contains information on the concrete legal business (which is part of its second clause) as well as on the contracting parties (which makes the first and third clause of that formula), and the formula *res* applies to the subject of legal business (Grbavac, *Notarijat*, 137, 162).

[56] The gerund *faciendi* introduces *accusativus cum infinitivo* in two titles. For the use of the active infinitive instead of the passive infinitive with *facio*, see Peter Stotz, *Handbuch zur lateinischen Sprache des Mittelalters. Formenlehre, Syntax und Stilistik*, Vierter Band (Zürich: Verlag C. H. Beck, 1998), 344.

omitted nouns, the gerunds would have been their objective genitives. From this, it can be concluded that Perençanus deliberately omitted these nouns which would appear in a superior syntactic function, and this can also clearly be seen from other titles where he uses the gerund in the genitive case + the object in the accusative (e.g., *Carta restituendi* alqd, *Carta laborandi* alqd, titles which relate to the promise to return a purchased item or to a work obligation). Even though the word *promissio* has been omitted in these titles, the verbs *promissit et se obligauit* in the disposition, i.e., in the formula *contrahentes*, confirm the fact that these really do refer to a promise. The titles of deeds from which, as we have seen, the nouns *carta* or *instrumentum* were omitted, along with the name of the contractor, illustrate the tendency to shorten titles by omitting some keywords.

The ratio between the stems *repudia-* and *refuta-* in the titles is 2:3. However, it is necessary to see whether this ratio is the same in the disposition, which states that the future groom (X) promised and made a commitment to a family member of his future in-laws (Y) that within fifteen or thirty days after the marriage he would persuade his wife (A) to give up her part of the inheritance:

> **X** solempni stipulatione promisit et se obligauit **Y** facere et curare cum effectu, quod **A** eius sponsa et uxor futura et filia dicti/-e **Y**… infra quindecim dies proximos / (vnum mensem proxime venturum) a die, quod dictus **X** ipsam **A**, eius uxorem futuram, domum conduxerit, libere et expedite <u>faciet</u> **Y**…

The first two earliest preserved contracts in Perençanus's registry do not contain any nouns or verbs derived from the stems *refuta-* and *repudia-* in the disposition, since the formula *finis*, i.e. the statement on the cessation of all future claims related to the inheritance,[57] follows as the object of the promise. So, the rest of the above sentence reads:

> … finem, remissionem, quietationem et perpetuam liberationem ac ec(c)iam pactum perpetuum et speciale de non petendo / (de nil vlterius petendo) ipsi **Y** uel suis heredibus et successoribus aliquid de aliquibus bonis mobilibus et immobilibus tam paternis quam maternis…

In the last three contracts, the stem *refuta-* appears in the *instrumentum refutationis* and *reffutatio*, which represent the object of the promise,

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[57] For the different forms of the formula *finis et refutatio*, see Grbavac, *Notarijat*, 155-7.

instead of the formula *finis*, where it is explicitly stated that after fifteen or thirty days a disclaimer of interest in the father's and/or mother's assets will be made. This way, Perençanus drafts the contract more concisely without changing its basic purpose in any way, so the alternative continuation of the interrupted sentence reads:

> … <u>faciet</u> instrumentum refutationis ipsi **Y** ac omnem reffutationem neccessariam et oportunam ei faciet de omnibus bonis paternis et maternis…

The reason for the renunciation follows after the content of the promise. In the first four contracts, the reason was that the bride's inheritance had been paid out, which was confirmed by a recently concluded dowry contract, and in the last contract, the bride received her part of the inheritance through a Will.

The promise to renounce one's inheritance was not recorded as the title of the contract in earlier notarial records, which does not mean that such contracts did not exist, but more on that later.

Disclaimers of interest (renunciation of the father's and/or mother's possessions)

Given the variation between the stems *refuta-* and *repudia-* in the titles of the first group, at first glance it would appear that there was no difference between the deeds referred to as *Repudiatio/Refutatio/Refutationis bonorum* and *Carta repudiationis bonorum/hereditatis*. What contributes most to the non-transparency in the classification of these deeds are the titles without sufficient information on the object of the disclaimer, and the names of both parties (*Refutatio*, *Repudiatio bonorum maternorum facta Iohanni de Parma*, *Reffutatio bonorum maternorum*, *Carta repudiationis hereditatis*) or different variants of the titles found in the earlier, as opposed to the later, practice of the notary (*Carta finis repudiandi bona paterna et materna…*, *Reffutatio bonorum…*). However, the difference between them can be seen in the disposition,[58] according to which, they can be classified into two different groups of deeds: disclaimers of interest and documents pertaining to inheritance in the form of statements. But a more detailed analysis of the titles of these deeds, most of them preserved

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[58] The term *disposition* also refers to statements on the rejection of inheritance, even though they lack the name of the consignee, i.e. the name of the other party in the contract included in the third clause of the formula *contrahentes* (*cf.* Stipišić, *PPZ*, 151, Grbavac, *Notarijat*, 137, 162).

in Perençanus's registry, shows that he most probably distinguished between these two groups by means of the word *carta*, which he omitted in the titles of disclaimers (except in the first two), and which he added to the titles of statements (except in *Repudiatio comissarie*). Furthermore, yet another distinctive feature which Perençanus applied in the titles of these documents in his later period can be observed: the inclusion of names in the title (in statements the stem *repudia-* normally stands next to the name of the person who rejects inheritance of his or her father, and in disclaimers the stem *refuta-* is next to the name of the female person who disclaims her father's and/or mother's possessions).

The titles of the second group of contracts show less variation, at least as far as Perençanus is concerned. The title *Refutationis bonorum paternorum et maternorum* quickly became the norm after the initial two contracts with the title *Carta finis*.[59] The ratio of keywords in all titles from Table 2 is as follows:

– *fines*, *finis* (1 FS, 1 PP), *finis repudiandi* (1 PP)
– *repudiatio* (1 AC)
– *ref(f)utatio* (1 FS, 8 + 2 PP).[60]
   The word *refutatio* therefore is much more frequently used in titles (9) compared to *repudiatio* (1) and *finis* (3). The reason why there is no variation between the stems *refuta-* and *repudia-* may lie in the fact that the verbs *renunciauit et refutauit* appear in the *contrahentes* formula (10 + 2), verified in the deeds which contain the stem *refuta-* in the title (except *Carta finis repudiandi*):
– *fecit fines/finem… ref(f)utationem…* (1 FS, 1 AC, 1 PP)
– *fecit finem… refutationem… et… refutauit et relaxauit* (1 FS)
– *renunciauit et reffutauit omnia bona*; *qua de causa fecit* + formula *finis* (9 + 2 PP).

Earlier disclaimers of interest, drawn up by Franciscus de Surdis and Andreas from Cantù, including the earliest by Perençanus, recorded the subject of legal business in the second clause of the *contrahentes* formula, which is termination of all further claims (formula *finis*) to inheritance:

A… fecit **Y** finem, remissionem, refutationem / (fines, remissionem, refutationem, absolutionem, liberationem / finem et refutationem ac remissionem / finem, quietacionem, transanctionem, reffutationem) et pactum perpetuum et speciale de non petendo…

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[59] For what can be the subject of disclaimers, see Bartulović, *PDFA*, 116-7.
[60] In the brackets + 2 refers to the mentioned disclaimers published in *CD* XVI.

In the eleven remaining Perençanus's disclaimers of interest, *fecit finem* is no longer an integral part of the second *contrahentes* clause, but rather the verbs *renunciauit et reffutauit* with the object in the accusative case *omnia et singula bona*. A somewhat modified part of the *fecit...*, extended by the addition of *plenam securitatem, renunciationem et reffutationem*, represents a separate *finis* formula[61] included in the closing sentence (*Qua de causa*). This is what it would look like:

> **A** sponte, libere et ex certa scientia et non herore ducta renunciauit et reffutauit… omnia et singula bona paterna et materna… et hoc iddeo fecit dicta **A** ipsi **Y** quia ipsa habuit et recepit integre ab eodem **Y** pro porcione sua in docte et pro docte… Qua de causa dicta **Y** fecit predicto **Y**… **plenam securitatem, renunciationem et reffutationem** ac finem… de non petendo…

The subject of these contracts, therefore, was the woman's renunciation of her father's and/or mother's possessions with her husband's consent before a member of her immediate family. The reason for the renunciation in the first contract, drawn up by Franciscus de Surdis, was the fact that the woman was entering a convent, and in the remaining fourteen the fact that the woman had her inheritance paid out when she got married.[62] The details of the dowry contract were usually also recorded in these cases. The women in the first two contracts from Franciscus's register also exclude certain legacies left to them in the Will from the disclaimer of interest.

Two more disclaimers of interest whose titles do not contain the type of contract have survived. Creste Tarallo calls this contract *securitatis carta* in the formulae:

– *pena* (*Et si contra hanc securitatis cartam ire teptauero, tunc tenear et debeam… soluere… pro pena*)
– *promissio de rati habitione*[63] (*et hec securitatis carta nichilominus in sua permaneat firmitate semper rata et firma*).

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[61] For the two different ways the formula *contrahentes* was drawn up in quitclaims, see Grbavac, *Notarijat*, 155.

[62] In the second disclaimer of interest from the register of Franciscus de Surdis, the payment of dowry is not explicitly stated as a reason when the woman renounced all further claims to her father's will. However, from her dowry contract it is evident that she had just received a dowry bequeathed to her by her father.

[63] For individual formulae of promise, see Grbavac, *Notarijat*, 216-57.

Furthermore, the word *securitas* appears immediately in the *contrahentes* formula (*plenam et irreuocabilem securitatem, finem, remissionem et quietationem, dimissionem et pactum de ulterius non petendo... fatio*).[64] It is very difficult to determine which term Nicola condam Iohannis would put in the title, because he calls it *refutacio, renunciacio, remissio et securitas* in the formula *promissio de rati habitione* (*promittens dictam refutacionem, renunciacionem, remissionem et securitatem firmam et ratam habere*).[65]

From all of the above, it is apparent that sometime after the dowry contract and the promise to renounce one's inheritance were drawn up, a disclaimer was drawn up as a confirmation that the promise was fulfilled. In Perençanus's registry, only two complementary contracts survived, belonging to Maria, daughter of Micha de Rosa. On 15 February 1367, a promise to renounce the inheritance was drawn up, together with the dowry contract, and on 4 May 1367, a disclaimer as the result of the fulfilled promise was made.[66] The analysis of the complementarity of all these contracts seems to show that four disclaimers and sixteen[67] promises to renounce possessions are missing, but one should be cautious in making this claim.

The reason for the lack of four disclaimers in Perençanus's register, which would have confirmed the fulfilment of the promise given on the same day when the dowry contract was drawn up,[68] could be very simple. Judging by the empty pages left in some fascicules of the well-preserved first box (*busta*) of his register,[69] where they would probably have been noted, it

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[64] *SZB I*, 230-1.

[65] *SZB II*, 104.

[66] See deeds in Appendix under 6.

[67] The number of possible promises refers to the disclaimers of interest in Table 2 as well as to the aforementioned ones which were either published in the *CD* or whose titles do not have a label of the type of notarial deed.

[68] The first two dowry contracts were made the same day as the promises, and the third one the day before (see deeds in Appendix under 7, 8 and 10). The fourth dowry contract has probably not survived judging by the damaged first pages of 17th fascicle, which contains the promise together with the quitclaim issued by the future son-in-law to the grandfather of his fiancée for the receipt of a part payment of the dowry (see ibid. under 11).

[69] The blank sheets (*PP*, b. I, fasc. 9, fol. 47v, fasc. 12, fol. 24v-25r, fasc. 14, fol. 50r, fasc. 17, fol. 31v) come after about two to two and a half months, when the drafting of the disclaimers could reasonably have been done (see Popis ugovora [List of contracts] in Bartulović, *PDFA*). The approximate time period was determined by the preserved promise and the complimentary disclaimer.

seems that Perençanus did not copy them from his notary minute (bastardel).[70]

However, there could be multiple reasons why certain promises, which should precede disclaimers of interest, are missing. The first reason might be that the promise, together with the dowry contract, was concluded at another notary's office. This would refer to three disclaimers from Perençanus's register. Perençanus left a blank space in one of the disclaimers so that the data for the dowry contract could be entered (the name of the notary and the date of issue),[71] while in the other two, he did not state the relevant data at all.[72] Regarding the aforementioned disclaimer from the register of Nicola condam Iohannis, it only states the woman's acknowledgment that her uncle had promised to pay her husband the dowry in two instalments. The reason for the lack of the appropriate dowry contract, with or without a disclaimer, could be either what was stated above, or the fact that they have not been preserved in his register.[73]

The second reason for the absence of some of the individual pertaining promises might be that they were never drawn up at all. Namely, one of the disclaimers was not preceded by a dowry contract, because the woman had decided to enter a convent, and three of the disclaimers were preceded only by the dowry contract without the promise to renounce the

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[70] For more on Perençanus's bastardel, see Bartulović, *PDFA*, 21, 24.

[71] See deed in Appendix under 9.

[72] It is possible that the dowry contract complementary to the disclaimer (see Appendix under 12), belonging to the wife of Benedictus Galelli, was made before 1366. Namely, the brothers Galelli, Benedictus and Madius, who had married the mentioned Maria de Rosa in 1366, had a dispute about the dowries of their wives in 1367 and 1368. In the disclaimer (see in Appendix under 21), even though in the name formula *Dobra, filia condam ser Mathei de Bixante de Chataro* (Dobra, daughter of the late ser Matheus de Bixante from Kotor) the husband's name is missing, it is very likely that Dobra's dowry contract had been made in Kotor. She made the disclaimer of the mother's possession in Zadar to her stepfather, the Zadar patrician Andreas de Cesamo, by whom her mother had four more daughters.

[73] Namely, the disclaimer, drafted on 1 July 1317, is in a notebook (*breuiarium*) which starts with the deed from 1 June 1317. It is possible that the complementary dowry contract drafted in about the first half of 1317 was written down by Nicolaus in an earlier notebook, which has not survived. Namely, the deeds preserved on the parchment with dates 27 April 1315, 7 September 1316 and 15 May 1317 testify to the fact that his notary register has not survived in its entirety (Tadija Smičiklas, (ed.), *CD* VIII (Zagreb: Tisak dioničke tiskare, 1910), 386-7, 430-1, 449).

inheritance.[74] As no promises to renounce the father's and/or the mother's possessions were recorded in the older notarial registers, the practice of drawing up these promises appears to be of an exceptional nature. This thesis seems to be supported by the narrative of the following lodging of a complaint about the unfulfilled promise to renounce the inheritance, drawn up by the Zadar notary Guido Benedicti from Padua in 1335:

> Cum Andreas filius olim Federici Grisogoni ciuis Iadre **promisset** domine Stane… matri condam domine Tomaxine eius vxoris et sponse **remitti et repudiari facere** vice eius vxoris **omnia bona paterna et materna secundum consuetudinem Iadre** ipsi domine Stane… **prout patet publico instrumento** scripto per presbiterum Guillelmum Castrensem canonicum et notarium Iadrensem sub anno incarnacionis domini millesimo trecentesimo duodecimo…[75]

In this part, it is key that the groom had given the promise, recorded by the Zadar notary presbyter Guillelmo Castrensis in 1312, according to the custom of the city of Zadar. It is precisely this prepositional periphrasis (*secundum consuetudinem Iadre*) which suggests that the drafting of this contract was not necessary. This seems to be supported by the statutory provision which states that the amount of dowry must not exceed the value of the property that the daughter would stand to inherit after the death of the parents.[76]

The third reason for the missing promises might be that the dowry contract and the disclaimer of interest were drawn up the same day, which was the case with seven of the promises.[77]

However, even disclaimers of interest were not obligatory. For example, apart from the nine dowry contracts complementary to the corresponding disclaimers, Perençanus's register contains further 128 surviving dowry contracts. After these contracts were made, no promises to renounce the inheritance nor disclaimers were drawn up. The question arises as to why some contracting parties, coming from the upper (13) and middle (8) social strata, felt the need to draw up promises and/or

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[74] See deeds in Appendix under 3, 5, 13, 16, 18.

[75] Tadija Smičiklas, (ed.), *CD* X (Zagreb: Tisak dioničke tiskare, 1912), 207-8.

[76] Josip Kolanović, and Mate Križman (eds), *Zadarski statut: sa svim reformacijama odnosno novim uredbama donesenima do godine 1563.* (hereafter: *ZS*) (Zadar: Ogranak Matice hrvatske, Zagreb: Hrvatski državni arhiv, 1997), book III, chapter 95.

[77] See deeds in Appendix under 1, 4, 14, 15, 17, 19, 20.

disclaimers of interest.[78] A logical answer may be a higher value of dowry. The value of the dowry in 13 of the 15 dowry contracts complementary with the promises and/or disclaimers of interest ranges from 225 to 400 ducats.[79] Only two contracts fall outside this range, the one with the amount of 40 ducats, and the other with 75 livres (pounds of small Venetian denars), which is approximately 28 ducats. A vacant terrain is added to the latter amount,[80] which does not significantly increase the overall value of the dowry compared to the high amount of dowries mentioned.[81] However, in some other dowry contracts, a similar range of values of dowries has been recorded, and in some cases it is even bigger,[82] so the reason for the drawing up of promises and/or disclaimers should be sought in interpersonal family relationships, when the family might want to protect themselves from a greedy son-in-law. According to the statutory provisions, the husband was the one who managed his wife's dowry and had control over it.[83]

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[78] It is interesting that more members within individual patrician families made promises or disclaimers (see in Appendix deeds of brothers Galelli (6,12) and Cipriano (8, 9, 13)).

[79] See in Appendix. If the value was expressed in livres in the contracts, it was converted into ducats for this chapter. In one of the disclaimers, 1000 livres were stated as being equivalent to 375 florins (*PP*, b. II, fasc. 1, fol. 33r). The florin and the ducat had the same exchange rate to the livre (*computando pro quolibet floreno libras tres et soldos duodecim paruorum* (e.g., *PP*, b. II, fasc. 6, fol. 12v) or *computando pro quolibet ducato libras tres et soldos duodecim paruorum* (e.g., *PP*, b. II, fasc. 6, fol. 29v). Here the differences in the exchange rates in earlier deeds are disregarded.

[80] The part of the contract which states the amount is damaged, so it could theoretically be 705 livres (*sept..g.. quinque paruorum*). But as the sentence further reads *inter (denarios), panos et res*, because the dowry doesn't consist only of money, but of various items whose value is expressed through money, it is clear that the value of the dowry is not great. Namely, the prepositional phrase *inter denariis, panos et res*, in which items of lower value are recorded, is usually used for a dowry of lesser value (*cf. PP*, b. I, fasc. 9, fol. 30r, fasc. 14, fol. 11r, 35v, 43v etc.), while for greater value more valuable things are listed in the prepositional phrase *inter denarios, aurum, argentum, / (perlas) et panos* (*cf. PP*, b. I, fasc. 9, fol. 21v, 51r, fasc. 13, fol. 20r etc.).

[81] The greatest value noted in Perençanus's register for a sold vacant terrain is 80 livres, which is about 30 ducats (*PP*, b. II, fasc. 19, fol. 27v).

[82] *PP*, b. I, fasc. 9, fol. 21v-22r (848 livres *inter denarios, aurum, argentum, res perlas et panos* = 317 ducats), b. II, fasc. 7, fol. 40r (600 florins), fasc. 17, fol. 9r-9v (375 ducats), etc.

[83] *ZS*, book III, chapter 99. For medieval statutory provisions which relate to family and hereditary law, see Lujo Margetić, *Hrvatsko srednjovjekovno obiteljsko*

Statements on the rejection of inheritance or the role of the executor of the Will

In the third group of deeds, the object of rejection is either inheritance, or the role of the executor of the Will, which is immediately apparent from the titles themselves. This group of deeds, all of which are recorded in Perençanus's registry, contains the largest number of inconsistencies in the use of the stems *repudia-* and *refuta-* in the titles and the dispositions, as is shown in Table 12-3.

Table 12-3. The ratio of the synonymous stems *repudia-* and *refuta-* in the titles, and the disposition of statements on the rejection of inheritance or the role of the testamentary executor

Stems *repudia-* and *refuta-*		
What is rejected	**Title**	**Disposition**
Inheritance	*repudiatio* (4)	*renunciauit et repudiauit + repudiatio* (2) *renunciauit et refutauit* (2) + *instrumentum renunciationis et reffutationis* (1)
Role of the testamentary executor	*repudiatio* (1) *reffutatio* (2)	*renunciauit et refutauit* (3) + *renuntiatio et repudiatio* (1) or *reffutatio* (2)

Upon examining dispositions of statements on the rejection of inheritance, it can be noticed that Perençanus varies between both stems (2:2), which is inconsistent with his use of the stem *repudia-* (4) in the titles. In statements on rejection of the role of the testamentary executor, Perençanus varies between the stems *repudia-* (1) and *refuta-* (2) in the titles, and he always notes the verbs *renunciauit et refutauit* in the disposition. The reason why Perençanus titled the second and third statements as a *refutatio* may lie in the fact that he was under the influence of disclaimers of interest, for which he quickly decided on a fixed form of the title, and which are contained in the second box of his register, together with the abovementioned statements.

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i nasljedno pravo [Croatian medieval family and hereditary law] (Zagreb: Narodne novine, 1996).

In these documents, the heir or the executor named in the Will (or his procurator) comes before the judge examiner, and/or the rectors, and gives a statement about the rejection of the inheritance or the role of the executor. In three statements, the heir (son), or heirs (wife with children) (X), reject the inheritance of the recently deceased (Y), citing the perniciousness of such inheritance to him/them as the reason:

> … coram… honorabilibus rectoribus ciuitatis Iadre / (et presente… iudice examinatore),[84] comparuit **X**, asserens dictum **Y**, decessisse et mortuum esse, sciens et cognoscens hereditatem dicti **Y** esse ei magis dampnosam quam lucrosam et in ipsa hereditate se numquam impediuisse seu inmiscuisse neque impedire intendebat seu volebat, set pocius ab ea se abstinere. Quam quidem hereditatem modis omnibus, quibus melius potuit, libere et expedite coram ipsis dominis… renunciauit et repudiauit nolens neque intendens se in ea modo aliquo inmiscere uel impedire.

In one of the statements, an emancipated son rejected the inheritance of his father, who had been exiled from Zadar for murder, because he could not guarantee he would be able to afford a lawsuit and pay out the damages, given the fact that his father's possessions were burdened with debt.

The reason for refusing the role of the testamentary executor was usually the fact that the nominee was too busy, which would prevent him from being fully committed to carrying out the instructions of a will according to the wishes of the testator. Two statements on the rejection of the role of the executor from earlier notarial records–one with the title containing the third synonym *Renuntiatio Nichole de Zadulinis* in the register of Andreas from Cantù, and the other without a title in the register of Gerardus from Padua[85]–differ from Perençanus's in that the statement of the appointed executor was written by the notary in the presence of witnesses, and not before officials. The verbs used in these statements are *renuntiauit et renuit / refutauit et renunciauit*. The reason for the rejection of the role in the first statement is that the nominee cannot stay in Zadar because he resides in Kukljica, while in the other statement, no reason is given.

At the end of almost all the statements recorded in Perençanus's registry, regardless of what was rejected, the official acceptance by the officials followed, worded in a variety of ways:

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[84] In the last document in Table 2, the wife and children of the deceased appeared before the duke of Zadar, rectors and the judge examiner.
[85] *SZB II*, 187.

> Qui domini rectores suprascripti audientes et inteligentes dictam repudiationem hereditatis condam **Y** factam per **X**… suam et comunis Iadre auctoritatem interposuerunt et decretum.
>
> … rogans prefactum iudicem examinatorem ut in hoc se subcribat et manum ponat et me notarium infrascriptum de hiis ipsi **X** conficere deberem publicum instrumentum. Etc.

The last statement from Perençanus's registry differs from the previous ones, in that the statement on the rejection of the role of the executor was accepted by a second executor, in the presence not only of witnesses, as was the case with the statement from the register of Gerardus from Padua, but also in the presence of officials. Furthermore, this statement is more of a notary contract containing different formulae (*contrahentes*, *promissio de legitima deffensione*, *pena*, *refectio damnorum et expensarum*, *obligatio bonorum*).

Conclusion

Although at first glance, the examination of titles of deeds in medieval notarial records might seem unnecessary, the aim of such research is to make the classification of notarial deeds easier by applying the appropriate terminology when compiling abstracts and indices of terms in future digital editions of unpublished and reprinted published notary records, especially considering that the title gives the most concise information of what the document contains.

When one analyses and compares the titles of deeds in the first three published volumes of the notarial records of the six notaries of Zadar (from 1279 to 1350 with some interruptions) with later notarial records, i.e. the fourth and fifth volumes which contain the records of the notary Andreas from Cantù (1353-6) and the unpublished records of the notary Petrus, called Perençanus from Padua (1365-92), several problems appear. The first problem is that there is a large number of untitled deeds, which can be largely attributed to the fragmentary preservation of the notary registers (SZB I-II). The second problem is that in most of the deeds from the earlier period, the title normally contains only the name of the client, with just a handful of indications of the type of legal business conducted (SZB I-III). This is where they differ significantly from the later notarial records (SZB IV-V, PP), which show a drastic increase in the inclusion of the various legal business in the titles, i.e. an increase in the number of different types of notarial deeds. Furthermore, the third problem is the variation in specifying the type of deed in titles by all notaries. In addition to differing from each other in the use of synonyms for a particular type of

deed (e.g., a contract for the repurchase of purchased items can be entitled *Retradicio* or *Carta restitutionis*), the notaries show inconsistencies even in their own practice (e.g., Perençanus calls a lease contract *Carta locationis/affictationis/concessionis*). The use of synonyms is characteristic of the medieval legal discourse, and in titles this may be even more apparent, for example, by having two or more verbs in the disposition that describe a particular type of legal business (e.g., *dedit, concessit et locauit* in *Carta locationis/affictationis/concessionis*) or by a change taking place in the way the disposition is drafted (e.g,. in procurations *comitens comitto… tibi* in *Comissio*, and later *fecit… procuratorem* u *Carta procurationis*).

But the biggest problem in the use of synonyms in titles is when certain synonyms do not refer to only one type of notarial deed, as is the case of the synonymous stems *refuta-* and *repudia-*. Namely, these stems may relate to three kinds of deeds, and it is sometimes not sufficiently clear from the titles themselves which is which, but it becomes obvious from the disposition of the deed whether a document is a promise to renounce or a disclaimer of the father's and/or mother's possessions, or a statement on the rejection of inheritance or the role of the testamentary executor. Because of the differences in the dispositions of these notarial deeds, it is necessary to distinguish between the synonymous terms *refutatio* and *repudiatio* when compiling abstracts of deeds in the Croatian language, regardless of their identical basic meanings. Namely, the statements literally mean rejecting 'by all means' (*omnibus modis, quibus melius potuit, libere renunciauit et repudiauit/refutauit*) in the sense of not accepting the inheritance by a heir before officials, so the basic meaning *to reject* (odbijati) should be applied to them. Contracts drawn up in the form of disclaimers testify to a 'voluntary rejection' (*sponte, libere et ex certa sciencia renunciauit et refutauit*) of her father's and/or mother's possessions by a married woman before a member of her immediate family, so, in this case, the meaning *to disclaim* (odricati se) would be more appropriate, also applicable to the promises connected to the same case.

Finally, the use of synonyms may result in the creation of a special subset of deeds, such as in the case of a group of quitclaims (*securitas/finis/remissio/quietatio*), within which, over time, the ones relating to the renunciation of inheritance were given a special title of *Refutatio/Repudiatio* (disclaimer of interest). In general, this separation can be viewed through the prism of the aspirations of the medieval man to create statutory provisions pertaining to family and inheritance law in order to provide a material basis for his descendants, which found its

confirmation at the linguistic level when *finis* gave way to *refutatio/repudiatio* in the titles of medieval notarial deeds.

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Appendix

Table 12-4. List of complementary deeds (*Promissio refutandi bona* (P), *Carta dotis* (D), *Refutatio bonorum* (R)) regarding the parties and the amount of dowry

	Deeds	**Parties**	**Amount of dowry / note**
	(R) *SZB I*, 230-231 (D) *SZB I*, 231	1. Michael cn. Cerni de Merça, CI[86] 2. Madius de Uaricassa, curator heredum cn. Artuyci et Scelce de Pola 3. Pria, filia cn. Artuyci de Pola (wife of 1)	500 libre in una statione + 300 libre in uno loco + 200 libre in pecunia numerata
	(R) *SZB II*, 104	1. Femia, uxor Simonis Contareni, CI, et filia olim Cerni de Piloso, CI 2. Marinus, plebanus sancti Stephani de Iadra (uncle of 1)	"Cum tu Marinus... statueris et promisseris dicto Simoni, uiro meo, dare et soluere libras octingentas paruorum in dote..."
	(R) *SZB III*, 33-34	1. Maria, filia cn. Grisogoni de Marino, CI 2. Marinus suo nomine et nomine Nicolai fratris (brother of 1)	"intendat profiteri in monasterio..."
	(D) *SZB III*, 83 (R) *SZB III*, 83-84	1. Ludouicus cn. Iohannis olim Petri, ciuis Tragurii 2. Iohannes, filius cn. Biualdi de Botono, CI 3. Nicolota (sister of 2, wife of 1)	1000 libre per testamentum
	(D) *SZB IV*, 458-459 (R) *SZB IV*, 481-482	1. Zaninus cn. Antonii/Bastardi de Ganio, HI 2. Iohannes caligarius, filius cn. Iacobi de Parma, HI 3. Margarita (sister of 2, wife of 1)	150 libre / 40 ducati

[86] Abbreviations: CI = ciuis Iadre, HI = habitator Iadre, cn. = condam, mag. = magister, magistri.

(D) *PP*, I, 4, 26v-27r (P) *PP*, I, 4, 27v-28r (R) *PP*, I, 5, 16r-16v	1. Madius, filius Nicolay Galelli, CI 2. Micha cn. Petri Miche de Rosa, CI 3. Maria (daughter of 2, wife of 1)	400 floreni
(D) *PP*, I, 9, 30v-31r (P) *PP*, I, 9, 31r-31v	1. Iohannes cn. Venture Falchucii de Iadra 2. Bona, relicta Designe Domiani de Pago (daughter of 3) 3. Iohannes cn. Iacobi de Çiçono de Iadra 4. Cecilia (daugher of 2, grandaughter of 3, wife of 1)	800 libre
(D) *PP*, I, 11, 14r-14v (P) *PP*, I, 11, 15r	1. Damianus cn. Grixogoni de Chalcina, CI 2. Madius cn. Çoili de Cipriano, CI 3. Iohanna (daughter of 2, wife of 1)	1000 libre
(R) *PP*, I, 14, 4r-4v	1. Nicolota, uxor Damiani de Cipriano, CI (daughter of 2) 2. Blaxius cn. Marini de Soppe, CI	"secundum tenorem instrumenti sue doctis scripti sub millesimo trecentesimo sexagesimo "
(D) *PP*, I, 14, 23v (P) *PP*, I, 14, 26r-26v	1. Thomassius cn. Iohannis Rubey de Iadra 2. mag. Cressius marangonus cn. mag. Marci A barchis de Iadra 3. Mariça (daughter of 2, wife of 1)	600 libre
(P) *PP*, I, 17, 2v	1. mag. Georgius maragonus cn. mag. Desse protomagistri de Iadra 2. Angellus drapperius cn. Galgani de Sancto Geminiano, HI 3. Dobra, filia cn. Rigucii (grandaughter of 2, wife of 1)	Carta finis Angeli condam Galgani (PP, I, 17, 2r)

(R) *PP*, II, 1, 8r-8v	1. Helena, uxor Benedicti cn. Nicolay Galelli, CI (daughter of 2) 2. Paxina, relicta cn. Damiani de Varicassis, CI	"secundum tenorem sui instrumenti dotis ut communiter dixerunt" Prolongatio termini compromissi ser Benedicti et Madii fratrum (PP, I, 9, 5r) Carta compromissi inter Benedictum et Madium, fratres condam ser Nicolay Galelli (PP, I, 9, 45v–46r)
(D) *PP*, II, 1, 9v (R) *PP*, II, 1, 32v-33r	1. Bartolomeus cn. Çoili de Cipriano, CI 2. Iacobus cn. Gregorii de Çadulinis 3. Philippa (daughter of 2, wife of 1)	1000 libre
(D) *PP*, II, 4, 42r (R) *PP*, II, 4, 42r-42v	1. Cressius marinarius dictus Longich cn. Georgii de Iadra 2. Milexa cn. Chalebi de Iadra 3. Ielena (daughter of 2, wife of 1)	800 libre
(D) *PP*, II, 7, 34v-35r (R) *PP*, II, 7, 35r-35v	1. Grixogonus cn. Laurencii de Ceualelis, CI 2. Iohannes, filius cn. Mauri de Grixogonis, CI 3. Andreas suo nomine et nomine fratris Cressuli (brother of 2 and 4) 4. Marcheta (sister of 2–3, wife of 1)	400 ducati partim in denariis et partim in auro, argento et aliis rebus + 1440 libre (?)
(D) *PP*, II, 8, 22v-23r (R) *PP*, II, 8, 40r	1. Chosa cn. Mathey de [Begna], CI 2. Andreas, filius cn. militis regii domini Iohannis de Grixogonis 3. procuratores Doymi (brother of 2-3) 4. Nicolota (sister of 3-4, wife of 1)	600 floreni
(D) *PP*, III, 2, 47r (R) *PP*, III, 2, 47v-48r	1. Mladinus Papratich de Iadra 2. Damianus pictor, filius cn. Cressii pictoris de Iadra 3. Thomaxina (sister of 2, wife of 1)	600 libre

	(D) *PP*, III, 3, 21r-21v (R) *CD* XVI, 203-205	1. Matheus cn. strenui militis domini Iacobi de Cesamo, CI 2. Petrus cn. Çoili de Nassis, CI (uncle of 3) 3. Maria, filia cn. Dominici de Nassis (wife of 1)	375 ducati
	(D) *PP*, III, 4, 12v-13r (R) PP, III, 4, 13r	1. Yuanes chalefadus, filius Michaelis chalefadi, HI 2. Perfcha, relicta cn. Marinci et nunc uxor Georgii Milesich 3. Marica, filia cn. Marinci (wife of 1)	75 libre inter panos et res + locum vacuum
	(D) *PP*, III, 6, 20v-21r (R) *PP*, III, 6, 21r	1. Martinus cn. Paladini de Iadra 2. Maria, relicta cn. mag. Luce barberii de Iadra 3. Chatarina (daughter of 2, wife of 1)	700 libre inter denarios, panos, aurum et argentum + 300 libre pro una pecia terre vineate gognaiorum quattuor
	(R) *CD* XVI, 180-182	1. Dobra, filia cn. Mathey de Bixante de Chataro (stepdaughter of 2) 2. Andreas cn. Çoilli de Cesamo, CI, maritus Pasque, relicte cn. Mathey de Bixante	"causa dandi et ponendi in dote sua tempore suarum nupciarum"

CHAPTER 13

FRANJO KSAVER KUHAČ (1834-1911): THE SECOND AND THE THIRD BOOK OF CORRESPONDENCE – THREE CASE STUDIES[1]

SARA RIES

Abstract

Amid the written legacy of Franjo Ksaver Kuhač (1834-1911), recognized as the first Croatian musicologist (music historian and ethnomusicologist), there is a comprehensive collection of Kuhač's letters. The correspondence is collected in thirteen books, so-called *Briefcopirbücher*, as he personally named them. The correspondence covers the time span from 1860 to 1911, the period of the growing awareness of national culture and heritage in order to promote new national identity. Kuhač's letters are valuable source of information about cultural, political, and musical events, as well as on his life, work and activities. Most of them were written in German, in Gothic script, but some are written in Croatian, in Latin script.

The first volume of the correspondence was published in 1989 and 1992 (prepared and edited by Ladislav Šaban). The second and the third books (1864-1874) are being digitized and prepared, to be transliterated into Latin script and translated into Croatian. They give evidence on the period marked by important political and cultural changes, as well as Kuhač's strivings to collect financial and moral supports for his endeavours in collecting South Slavic folk-songs. Furthermore, the letters are vivid evidence of how the Gothic and Latin script intertwine, i.e. how Latin script and Croatian language, due to political and personal circumstances, gradually predominated in Kuhač's life and contacts.

Several case studies will be presented, which chronicle people and events. The aforementioned will be discussed in the comments supplementing the letters, as an essential part of the planned publication of these two volumes of Kuhač's correspondence. The research is a part of a nationally financed project IP-2016-06-4476: *Networking Through Music: Changes of Paradigms in the "Long 19th Century"–From Luka Sorkočević to Franjo Ks. Kuhač* (NETMUS19, 2017-2021).

Keywords: Franjo Ksaver Kuhač, correspondence, gothic script, Kurrentschrift

Franjo Ksaver Kuhač – the first Croatian musicologist

Although there were earlier sporadic researches that were partially concerned with the history of music in the 19th century, as in other European countries, the historiographic researches about music in Croatia intensified, despite the fact that there were no professional researchers on music, and the music historiography had, in fact, no tradition. The lack of collected and systematized data in Croatian lands made Franz Xaver Koch, later known as Franjo Ksaver Kuhač, eager to change and improve the said field by doing versatile and comprehensive researches in traditional and art music.

With his devoted and extensive fieldwork, he tried to record the musical heritage of these lands, and thus prevent its possible loss. Moreover, with his published as well as his unpublished works, Kuhač laid the foundations of music science in Croatia, naming it 'musicology' by 1884. Kuhač wanted to determine common and recognizable characteristics of folk music on Slavic territories, thus laying the foundation of the national style in Croatian art music. The comparative analysis of music was one of the basic parts of Kuhač's work; during his lifetime he collected and analysed thousands of melodies in order to distinguish musical features of other nations from the original and 'true' Slavic characteristics in music. His research opus was indispensable for the development of disciplines such as musicology, ethnomusicology and musical historiography, despite his, sometimes unverified, claims and hypotheses, which lacked argument, along with his controversial attitudes and ideas (primarily because he did not consult relevant written sources, or because his initial standpoints for their interpretation were marked by nationalistic attitude, characteristic of some Slavic writers of that time). He even attempted to validate the long Slavic music tradition through the attribution of Croatian origin to famous foreign composers, supporting his

claims with pseudo-sciences such as physiognomy. However, Kuhač's versatility, and a wide range of interests in music culture, music history, and tradition, are unquestionable: he studied and recorded the traditional music and instruments of Southern Slavs, wrote text/essays in music history (mostly national) and did pedagogical work (in theory and in praxis), along with criticism. His literary works, books, articles, and studies (those which were published and those which remained in manuscripts) have served many musicologists, ethnomusicologists and researchers, as the initial point for the study of Croatian music history.

The correspondence

With such a wide spectrum of scientific activity, including fieldwork and traveling, as well as day-to-day activities, Kuhač preserved copies and concepts of his sent letters in order to keep track of everything he has written to his professional and private contacts. This proved to be very helpful in case a letter got lost, or in case of delays of shipments (mostly books and sheet music), which happened often, as the shipping of letters and packages was unreliable. For example:

> Es ist schon über einem monat seit ich bei der hiesigen dampfschiffagentie einen sack mel an Sie aufgab, und weiss noch immer nicht, ob Sie das mel erhalten haben oder nicht.[2]

Thirteen books of letters serve as a source for historiographic research of Kuhač. Their planned publication will bring deeper understanding of cultural, political, and social opportunities in the Croatian area at the time, and their direct influence on Kuhač's life, preferences, and output. One is not able to understand the historical events in their entirety, because only the facts and events that are preserved are open to interpretation in dealing with this type of archival material. Thus, these letters provide a rather complete and sincere portrayal of Kuhač's life and career, observed from his own angle, and his opinion on contemporary events and persons.

Kuhač's written legacy (notes, articles, his compositions and old sheet music) is stored mainly in three institutions in Zagreb: The Archives of the Croatian Academy of Sciences and Arts, the National and University Library, and the Croatian State Archives, where the complete correspondence

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[2] "It has been over a month since I sent you a sack of flour with the local steamboat agency, and I still do not know if you got the flour or not." Written in a letter to Josef Schlesinger from December 6 1868.

has also been housed (call number HR-HDA 805, 52/1-13[3]). However, all the correspondence has been recorded on microfilm, and recently, the first three volumes have been digitized. The microfilms and their photos, as well as the digitized material of the three volumes of correspondence, are kept in the Department for History of Croatian Music of the Croatian Academy of Sciences and Arts.

These thirteen books of correspondence, the so-called *Briefcopirbücher*, as Kuhač himself named them, contain some three thousand letters. The exact number of letters is difficult to detect, while some of the pages are missing; either Kuhač himself, or a family member, removed some of the pages (even whole letters), probably wanting some affairs and events to remain private. In addition to the minor loss of some material, the letters addressed to Kuhač are unfortunately only very partially preserved.[4] Nevertheless, one can partly deduce the content of received letters from Kuhač's answers to his addressees. There are only a few copies (made by Kuhač) of received letters, such as letters of recommendation or similar types of letters, mostly received from prominent public persons, patrons or politicians, such as Croatian composer and military musician Ferdo Rusan,[5] or composer Ferdo Wiesner Livadić.[6] As the majority of Kuhač's letters are written in the German language and Gothic script (also known as *Kurrentschrift*), it is mandatory to transliterate and translate them in order to fully understand, interpret, and comment on them.[7]

The preserved correspondence covers the time span from 1860 to 1911, from the beginning of Kuhač's professional career in music till his death; the period of the growing awareness of national culture and heritage after the abolishment of the neo-absolutism, in order to promote new national identity. This article concentrates on the second and third volumes of said correspondence, comprising letters written from 1864 to 1874. The second book covers a relatively long period of five years (from January 1 1864 to the end of 1869) and consists of almost 220 letters, written prevailingly, in German. The third book also covers a period of five years (from January 10 1870 to September 1874), but includes a significantly smaller amount of letters - c150. The significance of interpretation and understanding of

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[3] http://arhinet.arhiv.hr/details.aspx?ItemId=1_4722, accessed April 24 2018.
[4] Some of the received letters are kept in Croatian State Archive, in the Archives of the Croatian Academy and in the National and University Library in Zagreb, but they are not nearly numerous as the letters Kuhač sent.
[5] A recommendation letter from June 5 1869.
[6] A letter from July 17 1869.
[7] There are also letters written in Latin script, and very few of them are written in Cyrillic script.

those letters is not only gaining information about Kuhač's attitudes, ideas, and relations between him and his colleagues, but also understanding his views and attitudes about his work and music, along with national and cultural affairs in Croatia and Europe. He persistently wrote letters to many eminent politicians and public persons, as well as his colleagues, not only in Croatia, but also across Europe. His addressees were located in cities which are in today's Hungary, Austria, Germany, Czech Republic, Switzerland, Italy, Serbia, Montenegro, Bosnia, Slovenia, Bulgaria, France, Russia, Ukraine, etc. Kuhač's aim was to present himself, his ideas regarding national music, music theory, and music historiography, and his work, to gain new information on musical culture, and, most importantly, to gain financial and moral support for publishing his scientific and music output, as well as, if possible, to further educate himself. His letters provide excellent evidence on a period marked by important political and cultural changes, such as strengthening the national identity not only in Croatia, but also in the whole of Europe, as well as Kuhač's strivings, in those politically unstable times, to collect financial and moral support for his travels, which were necessary for collecting South Slavic folk-songs. In addition, the letters give the opportunity to follow the developmental phases of his oeuvre. For instance, in January 1867, his collection of folk-songs numbers 300 music sheets (…*Meine liedersammlung ist bereits auf 300 druckfertige bogen manuscripte angewachsen, die ich bald in die welt schicken werde;…*)[8] and by May 1873 Kuhač states that he has collected 2000 folk-songs[9] (*die Rückenschrift der Briefe ist folgende: 2000 narodnih popjevaka južnih Slavena – 2000 Volkslieder der Südslaven aus Bulgarien, Serbien, Bosnien, Hercegovina, Montenegro, Kroatien, Slavonien, Küstenland, Dalmatien, Ungarn, Krain, Kärnten und Steiermark*).[10] In this article, three case studies from his second and third books of correspondence (1864-1874) will be presented, which, language-wise, represent three types of letters.

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[8] "…My collection of songs has already grown to 300 ready-to-print music manuscripts, and I will soon unveil them to the world." Written in letter to Branko Raić from January 10 1867.

[9] Vjera Katalinić: "Letters as Sources for Music Historiography: The Case of the Second Volume of Kuhač's correspondence," in: *Franjo Ksaver Kuhač (1834-1911): Musical Historiography and Identity* (Zagreb: HMD 2013), 62.

[10] "The cover of the letter is following: 2000 South Slavic folk-songs from Bulgaria, Serbia, Bosnia, Hercegovina, Montenegro, Croatia, Slavonia, Croatian Littoral, Dalmatia, Hungary, Carniola, Carinthia and Styria." Written in letter to Ljudevit Farkaš Vukotinović from May 7 1873.

The process of transliteration

The research of Kuhač's letters is a process that began many years ago. However, due to various circumstances, and the great amount of material, the research was never fully completed. The first book of correspondence has been published in two volumes, in 1989 and 1992 (prepared and edited by Ladislav Šaban).[11] Like the letters from the first book, the majority of the letters from the second and third books of correspondence are written in gothic handwriting, known as *Kurrentschrift, Alte Deutsche Schrift* and *German cursive.* It is an old German script, the origins of which can be perceived in the *Bastarda* (or *bastard*, a blackletter script used in France) which emerged around the early 16th century, when people were trying to devise a more free-flowing handwriting.[12] The great need for a uniform and legible handwriting led to the development of the *Kurrent,* a script that was soon adopted by many chancelleries because it was beautiful, fast to write, and, most importantly, comparatively readable. This resulted in the widespread usage of *Kurrent* script as a normal, everyday, handwriting. Over the next two centuries writing styles gradually standardized, and by the end of the 18th century the 'modern' form of the *Kurrent* script was established, and used almost until World War I. However, after the turn of the century, *Kurrent*, much like its printed counterpart, *Fraktur*, declined in popularity. In the early decades of the 20th century, it was replaced by *Sütterlin*, when graphic artist Ludwig Sütterlin (1865-1917) was commissioned by the Prussian Ministry of Science, Art and Culture, in 1911, to create a modern handwriting script. The modern script, based on *Kurrent*, was characterized by simplified letters consisting of wide curves and vertical strokes, with very few sharp angles. The script was taught in German schools until the 1940s, when it was phased out because of its illegibility abroad; the government declared that a Latin-based font, which is used today, was more suitable.

Furthermore, whilst dealing with documents written in the 1860s one has to have in mind one important thing, and that is different spelling and grammar. In the German language, that was the so-called *Grimmische Ortographie*, the work of famous German folklorists, linguists, philologists, and cultural researchers, the Brothers Grimm. Their orthography was written by Jacob Grimm (1785-1863), and presented in the preface of the

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[11] Ladislav Šaban, and Kos, Koraljka (ed.), *Kuhač, Franjo Ksaver: Korespondencija I/1 (1860-1862)* (Zagreb: JAZU, 1989), and Ladislav Šaban, and Koraljka Kos (ed.), *Kuhač, Franjo Ksaver: Korespondencija I/2 (1863)* (Zagreb: HAZU 1992).
[12] There is much discussion about the origin and development of the Old German script.

monumental work *Deutsches Wörterbuch,* Vol. 1, published in Leipzig in 1854. The colossal *German Dictionary* is one of the most comprehensive accomplishments in the history of German philology, and it marked the beginning of a new era for German philology, grammar, and orthography. The brothers strongly advocated a simpler orthographical system than the system that was then in use, but by insisting too much on historical spelling, their theories did not result in the desired greater unity. Jacob Grimm, and the advocates of the historic approach, considered the original writing, regardless of present pronunciation, as their principal model for a consistent orthography. Moreover, Grimm rejected the stylized script, *Fraktur,* claiming it was unhandy, barbaric, and ugly, and proposed the reintroduction of Latin script, which was used throughout the *Dictionary.* One of Grimm's main aims was a simple spelling, which he thought to achieve through those changes. In the first place, he objects to the fluctuating accumulation of vowels and consonants; *dt* is to be replaced by *t*, the *h* of *th* and finally omitted, etc. With his proposed reform, Grimm intended to reintroduce the simpler spelling of older times. Furthermore, Grimm's orthography does not capitalize substantives (including the first word in a sentence), which was a common practice in 19th century Germany, so Grimm's idea, together with his proposition to revert to the medieval convention of writing *sz* instead of *ß,* did not live long. Nevertheless, the theories proposed by him and his adherents were too inconsistent and confusing to effect a permanent reform. The most frequent characteristics of Grimm's orthography rules, which one can encounter while studying Kuhač's correspondence, are:

- simplification of so-called "Längenkennzeichnung", length indicators: *h* and *ie* only there, where historically correct (*weh*, but *han*, *war* instead of *hahn* and *wahr; ziehen*, but *gibt, vil* instead of *giebt, viel*; also *mer, ser, one, obwol, jar* instead of *mehr, sehr, ohne, obwohl, Jahr*…):[13]

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[13] "(…) Dies inconsequente verfahren ist unerträglich. wenn man nahm, lahm, zahm schreibt, warum nicht auch kahm? oder umgedreht, wenn kam, scham, name gilt, warum nicht nam, lam, zam? wer wahl, zahl, ihn, hahn, zahn, bühne setzt, müste der nicht auch thahl, schmahl, vihl, schwahn, thuhn schreiben, oder weshalb entbindet ihn die schreibung schmal und schwan nicht des schleppenden h in wahl und hahn? wir schreiben grün und schön, warum nicht kün, sondern kühn? was zwingt zu jahr und bahre, da doch klar und waren gilt? warum schere, aber beere und wehre? (…)" Jacob and Wilhelm Grimm, Preface to *Deutches Wörterbuch*, (Leipzig: S. Hirzel Verlag, 1854), accessed April 5 2018, http://woerterbuchnetz.de/cgi-bin/WBNetz/wbgui_py?sigle=DWB&lemid=GA00 001&mode=Vernetzung&hitlist=&patternlist=&mainmode=Vorworte

Grimm's orthography	Modern German	English translation
han	*Hahn*	*rooster*
war	*wahr*	*true, real*
vil	*viel*	*much, a lot of*
mer	*mehr*	*more*
ser	*sehr*	*very*
one	*ohne*	*without*
obwol	*obwohl*	*although*
jar	*Jahr*	*year*

- the nouns (excluding proper nouns) are written in lowercase.[14]

While Kuhač respected the simpler spelling and the lack of substantive capitalization, he did not respect either Grimm's recommendation to write in Latin script, or his proposition to write *sz* instead of *ß.* In some cases he just wrote simple *ss.* At the end (or at the beginning) of some of the letters, he even explained that he wrote by the rules of Grimm's orthography, thus the lack of substantive capitalization or the letter *h*. He stated that writing the substantives in lowercase was more convenient for him, due to the fact that it was the way of writing substantives in Croatian. For example, at the end of one of the letters Kuhač added:

> Nb. Ich pflege nach Grimmischer ortografie zu schreiben, da diese unserer kroatischen insoweit nahe ist, da auch dort die substantiva mit kleinem anfangsbuchstaben erscheinen."[15]

The transliterated text is carried out with precision, using exact characters, as Kuhač did, including lowercase in nouns and titles (the exceptions are the words at the beginning of a sentence), absence of the aforementioned length indicators (*h, ie*), absence of punctuation (mostly commas), multiple punctuation marks (*; –* or *– –*), and spellings of his time (*componist, concert,* etc.). The grammatical errors (or nonchalance) are also undertaken (for example *Sie habe*…). Due to the numerous differences from the modern laws of orthography and grammar, the footnotes are a quintessential part of the transliteration. All the comments regarding text interventions made by Kuhač, and all the corrected spelling

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[14] There are some letters which don't follow the rules of *Grimmische Ortografie*, but there are very few of them.

[15] "NB: I try to write by the rules of Grimm's orthography, while this is somewhat similar to Croatian language where the substantives are also written with small first letters of the word." Written in the letter from April 5 1867, sent to Croatian writer Gjuro Deželić.

differences, are specified in the footnotes: primarily inserted words, sentences and paragraphs, including words corrected by Kuhač himself. In addition, the original page breaks are marked with the sign "//", and the paragraph changes are respected as well. The line changes are not respected, due to the somewhat smaller and narrower paper layout on which letters were written – it would have taken too much space. Furthermore, absolutely everything that was crossed, left out, or corrected, is also mentioned in the footnotes, even long paragraphs, or whole parts of a letter.

Case study 1: Gothic script
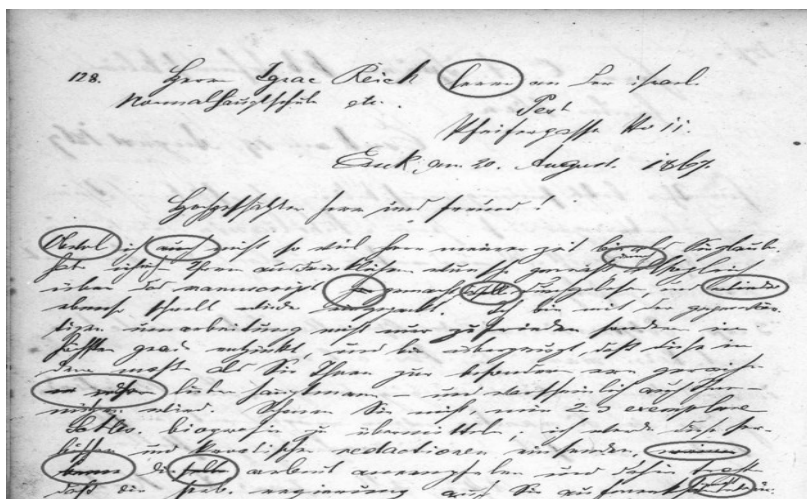
Figure 13-1. The facsimile of the letter from August 20 1867, addressed to Ignac Reich, historian and teacher at the Jewish Community School of Budapest[16]

Marked are the words that are corrected, inserted, or crossed over, as well as words lacking the length indicators (*h, ie*), all of which are mentioned in the footnotes (Figure 13-1). The transliterated text is as follows:

> 128. herrn Ignac Reich lerer[17] an der israel.
> normalhauptschule etc. Pest

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[16] See: http://www.jewishvirtuallibrary.org/reich-ign-x00e1-c, accessed April 5 2018.
[17] *Lehrer.*

Pfeifergasse No 11
Essek, am 20 August 1867.
Hochgeschätzter herr und freund!

Obwol[18] ich[19] nicht so viel herr meiner zeit bin als Sie glauben habe ich mich Ihrem ausdrücklichen wunsche gemäss, dennoch[20] alsogleich über das manucript gemacht dasselbe durchgelesen, und[21] ebenso schnell wieder eingepackt. Ich bin mit der gegenwärtigen umarbeitung nicht nur zufrieden sondern im höchsten grade entzückt, und bin überzeugt, dass diese in dem maße[22] als Sie Ihnen zur besonderen ere[23] gereichen unseren[24] lieben hauptmann–und warscheinlich[25] auch Ihnen nützen wird. Scheuen Sie nicht, mir 2-3 exemplare Schles. biografie zu übermitteln; ich werde diese serbischen und kroatischen redactionen einsenden, [26] die[27] arbeit anempfelen[28] und dahin trachten dass die serbische regierung auf Sie aufmerksam gemacht[29] werde (…)"[30]

Case study 2: The intertwining of the two scripts

Language-wise, there are several types of letters found in the correspondence: the letters written in German, Croatian[31] and a combination of these two languages. In the second book of correspondence there are a lot of letters which can adequately illustrate the intertwining of the Gothic and Latin script. Every word or term that is not of German origin is written in Latin

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[18] *Obwohl.*
[19] The word *auch* is crossed over.
[20] Inserted word.
[21] The word *wieder* is crossed over.
[22] *Maasse.*
[23] *Ehre.*
[24] Corrected word.
[25] *Wahrscheinlich.*
[26] Words *meine kann* are crossed over.
[27] Corrected word, the second part of the word is crossed over.
[28] *Anempfehlen.*
[29] Inserted word.
[30] This is how the transcribed letter looks - every inserted word is noted in the footnotes, as well as the words that are crossed over. The punctuation is not corrected, just the capitalization of the words at the beginning of the sentence. The absence of punctuation and some grammar mistakes will probably cause some minor problems whilst translating. When pointing out the absence of length indicators (*h, ie*), the word is specified in the footnote in the form it is written according to the contemporary grammar rules. In case a word or a part of a word is not readable, a question mark is placed.
[31] There is also a small number of letters written in Hungarian. Most of them are in the first volume of correspondence.

script. Usually that is the case with proper nouns (Croatian[32] personal names, non-German cities, months and titles) and some musical terms (like *composition, volkslied, manuscript, piece,* etc.) (Figure 13-2).
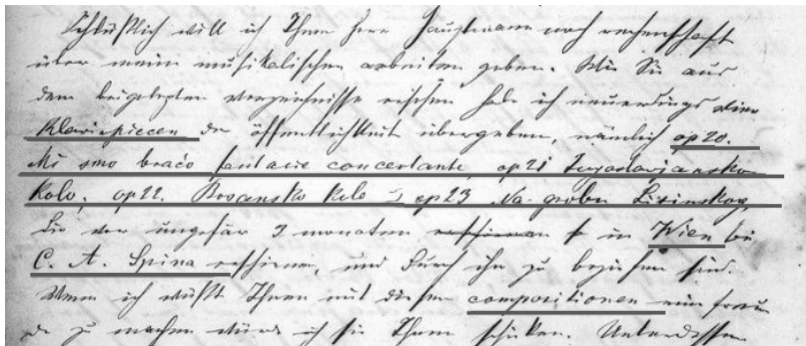
Figure 13-2. The intertwining of Gothic and Latin script

Here is an example of a letter from January 15 1867, sent to Serbian composer, conductor, and close friend, Josef Schlesinger (Josif Šlezinger). The letter is written in German, in *Kurrent,* but with some (international/Croatian) words (*Klavirpiecen, op. 20. Mi smo braćo fantasie concertante, op 21. Jugoslavjansko Kolo, op 22. Bosansko kolo, op 23. Na grobu Lisinskog, Wien, C. A. Spina, compositionen*) written in Latin script. This is a clear example of the intertwining of two scripts.

Case study 3: Letters in Latin script

The third type of letters are written in Croatian, in Latin script. Kuhač was born in the northern Croatian town of Osijek, as Franz Xaver Koch, into a German-speaking family. He started learning Croatian only in the 1860s, after returning from his studies abroad. The first letters in Croatian were written in 1863 (being part of the first volume of correspondence), so one can assume that around that year, Kuhač started to learn Croatian systematically. The letters are an authentic documentation on how the language changed, as well as how Kuhač's knowledge of Croatian language and his confidence in his writing abilities grew, as well as how Latin script, due to political and personal circumstances, gradually grew to

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[32] Sometimes even German names are written in Latin script, which is often the case with a publisher C. A. Spina.

predominate in Kuhač's life. This is also related to the growing awareness of Kuhač's national identity, which can be seen in the use of the Croatian version of his name; in the letter from May 24 1867, written to the Franciscan Solan Krkvarić, he signed himself as *Koch-Kuhač* for the first time. This bilingual form of his surname can also be found in the already mentioned letter from April 5 1867, written to Gjuro Deželić, where Kuhač expresses his gratitude for publishing his article: *"Nehmen Sie meinem aufrichtigen dank für die güte entgegen, mit der Sie den artikel Franjo Š. Koch-Kuhač in Ihrer geschätzten zeitschrift vom 30. März d. j. aufnamen"*.[33] In 1871, Kuhač moved from Osijek to Zagreb, due to his new identity, and changed his name to its Croatian version, Franjo Ksaver Kuhač. At the beginning of the second book of correspondence, letters written in Croatian are very rare, and in the year 1868 they become more frequent. The first letters written in Croatian, for example, are written in a very stiff and erring language which strongly resembles German syntax. As mentioned above, the number of Croatian letters grew as Kuhač improved his new language; it is obvious from his writing that his knowledge of Croatian developed, and that he wrote with confidence, even though one can still perceive a strong influence of German language constructions. At the end of the letter from September 9 1871, sent to his friend, Ante Salaj, Kuhač wrote:

> Nemojte ovaj list nikome pokazivati; Vi znate da ja dosta volju za hrvatski jezik imam, da nisam do sad još nikad toliko vremena imao, da bi ozbiljno gramatiku proučiti mogao.[34]

Even from a simple sentence like this, the aforementioned influence of German language is more than obvious: the sentence is divided by unnecessary commas and the placement of the verbs is inverted. In the letters in which he used (his) new Croatian musical terms, he placed the original German in parenthesis, with the aim of clarifying them. Some of the letters written in Croatian are not only important for linguistic and terminological research, but for historiographic investigation as well. They were regularly sent to important political figures of that time, including: Viceroy Levin Rauch; bishop, politician and Kuhač's benefactor Josip Juraj Strossmayer; poet and writer Petar Preradović; physician and politician Ivan Dežman; and Croatian historian, politician and writer Ivan

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[33] "Accept my sincere thanks for the kindness with which you accepted the article Franjo Š. Koch-Kuhač in your esteemed magazine from 30 March."
[34] "Please do not show this letter to anybody else; you know that I am eager to learn Croatian, but I still did not have enough time to study the grammar properly."

Kukuljević Sakcinski–with the intention of getting financial support for his endeavours in collecting folk songs. From those letters, one can connect and contextualize the political and cultural affairs which took place in Croatia and Austria, i.e., the Austro-Hungarian Empire, and how those affairs influenced (not always positively) the progress of Kuhač's work to a great extent.

Here is an example of a historically interesting letter from the second volume of Kuhač's correspondence, written in 1869 to Ivan Kukuljević Sakcinski (Figure 13-3).
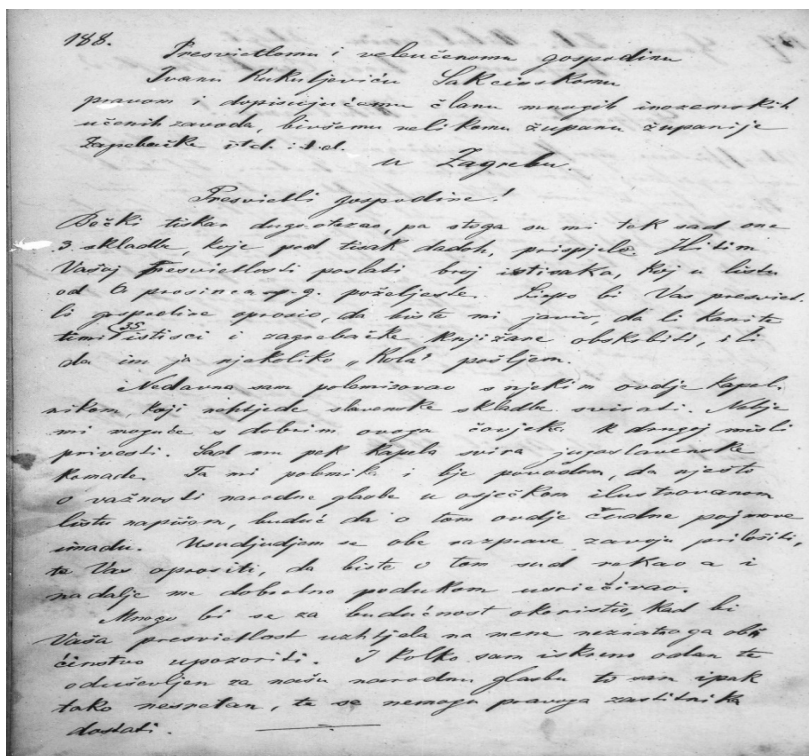
Figure 13-3. The letter to the Croatian historian, politician and writer Ivan Kukuljević Sakcinski from May 17 1869

There are also some challenging examples of received letters, which give insights about what Kuhač's contemporaries thought of him. An already

mentioned letter of recommendation, written by Ferdo Rusan, can serve as an illustration, in which he stated:

> Smatram si za dužnost našega doličnoga narodnoga skladatelja te neumornoga i riedkoga sabiratelja pučkih pjesamah g. Franju Šav. Kocha svim našim iskrenim rodoljubom i prijateljem narodnoga dobra, što najtoplije ovim preporučiti, moleći ih pristojno, da ga u njegovom koliko plemenitom toliko hvaledostojnom nastojanju i podhvatu sa svojom pripravnostju što bolje moguće, podupirati blagoizvole.
> U Virju 5. lipnja 1869.   Ferdo Rusan
>   por. u miru[35]

An online database

Some of the manifold difficulties and dilemmas encountered in the process of work on the letters are presented in this article (transliteration-wise and language-wise), and many more remarks will surely be encountered. The data and historical facts essential for Kuhač's biography will be discussed in the comments supplementing the letters, which are meant to be an essential part in the publishing of the correspondence. This is a research in progress, besides the translation, transliteration and digitization of the correspondence, and one of the planned results is the creation of an on-line accessible database which contributes to the preservation and accessibility of Croatian cultural heritage. The database, already visible in its initial phase, will provide basic information about the documents and terms, and contain all accessible biographical data of the addressees and persons mentioned in the letters.[36] The database has several searchable topics: Entries, Works, Notions, Persons, and Sources. One can search by the certain date or range of dates, terms, compositions or other kind of works of art (librettos or texts), persons, addresses (places) and key words (such as employment, biographical data or title). The complete list of persons and terms, as well as all of the biographical data addressees mentioned in the second and the third books of the correspondence, will be of great importance and help in preparing the aforementioned critical editions of the correspondence, and will also be essential in making a much-needed

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[35] "I consider it my duty to warmly recommend our excellent, indefatigable and rare collector of folk songs, Mr. Franjo Šav. Koch; our sincere patriot and friend of the national treasure, asking them politely to support him in the best way possible in his endeavors and efforts. In Virje, June 5, 1869. Ferdo Rusan, retired lieutenant"

[36] The link to the database: http://hmd-music.org/netmus19/index.php, accessed April 15, 2018.

comprehensive biography and bibliography of a pioneer of Croatian music historiography.

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TOPIC V:

LITERARY STUDIES

CHAPTER 14

LITERARY MATERIALIZATION OF INTANGIBLE CULTURAL HERITAGE: *ARS HORVATIANA*

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Abstract

This chapter is based on the UNESCO *Convention for the Safeguarding of the Intangible Cultural Heritage*, which, as a fundamental form of intangible cultural heritage, recognizes its ability to be 'transmitted' and states safeguarding measures aimed at "ensuring the viability of the intangible cultural heritage". Since literature does not duplicate the 'treasure of our ancestors', but reinterprets it, and popularizes it through interpretation, intangible cultural heritage is approached as a publicly available good, materialized by publishing through the production of literary texts.

Intangible cultural heritage is gaining popularity within the cultural and creative industries, a sector of which is the publishing industry. Published literary texts are publishing products with an enormous potential for linking culture and heritage to consumers of the new age. Such an approach to innovating the materialization of intangible cultural heritage is exemplified by the works of contemporary Croatian writer Jasna Horvat, whose texts are popularizing the intangible cultural heritage of the Republic of Croatia: the novel *Az*–the Glagolitic script, the novel *Bizarij*–historical figures as the determinants of Central European cultural context, and the novels *Vilikon* and *Vilijun*–the cultural link between Europe and the People's Republic of China. By using QR codes, the literary text of the *Ars Horvatiana* opus is brought closer to cultural consumers, and the printed book becomes a multimedia book open to multiple repeated readings. The topotheque of the novel *Vilijun*, a digital archive built for the long-term memory of the novel *Vilijun*, shows that literary-materialized cultural heritage ensures long-term memory, i.e., the memory of the

reviews of the novel, its performances in other art forms (e.g., plays), as well as local and global presentations. With this approach, literary texts materialize intangible cultural heritage, and the printed book becomes a sort of souvenir, and its life an attractive digital source of archival material for visitors of a public digital archive, such as the topotheque of the novel *Vilijun*.

Keywords: publishing, intangible cultural heritage, QR codes, *Ars Horvatiana*

Publishing of literary texts and cultural and creative industries

Culture is a complex concept that includes knowledge, beliefs, art, law, morality, customs, and similar abilities and habits acquired by a person as a member of the community. Kroeber and Kluckhohn[1] define culture as patterns of behaviour acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiment in artefacts. Rohner[2] sees culture as the totality of equivalent and complementary learned meanings maintained by a human population, or by identifiable segments of a population, and transmitted from one generation to the next.

The creative industry is the producer of cultural and creative products intended for the global marketplace, where they come together, meet and exchange cultures, cultural goods and cultural identities. According to Jelinčić,[3] cultural identity answers the question of one's place in the world. Huntington[4] also emphasized that cultural identity is an important determinant of an individual's belonging to a cultural space, i.e., its culture, history, heritage, language, religion, customs, system, and values. In that sense, Mićunović[5] emphasized that, within one cultural identity, at the same time, one can find the individual category of belonging to a

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[1] Alfred L. Kroeber, and Clayde Kluckholn, *Culture: a critical review of concepts and definitions* (Cambridge, MA: Harvard University Press 1963) [Orig. ed. 1952]

[2] Ronald P. Rohner, "Toward a conception of culture for cross-cultural psychology," *Journal of Cross-cultural psychology*, 15,2 (1984): 111-138.

[3] Daniela A. Jelinčić, "Turizam vs. identitet: globalizacija i tradicija," *Etnološka istraživanja*, 1,11 (2006): 161-183.

[4] Huntington, Samuel P. *The Clash of Civilizations and the Remaking of World Order* (New York: Simon & Schuster, 1996)

[5] Natalija D. Mićunović, "Kulturni identitet na prostoru bivše Jugoslavije," *Filozofija i društvo*, 12 (1997): 147-158.

group (with certain attributes of belonging) but also the *freedom of choice* in identity creation.

The UNESCO *Convention for the Safeguarding of the Intangible Cultural Heritage*[6] is a fundamental form for the preservation and systematic care of intangible cultural heritage. The text of this *Convention* recognizes the ability of cultural heritage to be 'transmitted', and it states safeguarding measures aimed at "ensuring the viability of the intangible cultural heritage."[7] Since literature does not duplicate the 'treasure of our ancestors' but reinterprets it and popularizes it through interpretation, publishing of literary texts is part of the creative industry which approaches intangible cultural heritage as a publicly available good whose intangible value is materialized through the production, reproduction, and distribution, of literary texts.

Reflection on culture requires the dialectics of homology of local and global culture, but also the acceptance of culture as a resource that must be preserved, not only by conservation, but also by future development. Publishing as an activity directly affects both of these cultural segments as resources, i.e., publishing at the same time preserves existing cultural values, but also develops them further.

Because of these features, publishing has two roles–a market and a cultural role. The role of these two publishing features is merged within the cultural and creative industries, a sector that is emerging in the Republic of Croatia. In addition to publishing, the book–the product of publishing–also has an important role within the cultural and creative industries. The book is considered as a product of publishing for which an attractive place in the market niche should be found, and, for the purpose of sales, it should understandably and effectively address the potential reader, i.e., the future consumer of this cultural good.

The book also has a dual function (as a cultural and economic good) and therefore requires a complex approach, combining local and global culture around the fact that the book is the basic means of nurturing the linguistic capital of a certain cultural identity, and thus cultural diversity on a global scale. Therefore, every piece of art is, above all, an indispensable combination of material and spiritual components. In other words, the product of culture has all the product features that can be quantified and expressed in a more material manner. At the same time, a characteristic of the product of culture is that it, above all, belongs to a group of *sui generis* products, which have material substance (*corpus materialis*) but also

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[6] UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage*, 17 October 2003, accessed May 18 2018, https://ich.unesco.org/en/convention.

[7] Ibid., Article 2.

spiritual value (*corpus mistycum*)*,* which makes it a special creation known as cultural good.[8]

The production of literary texts contains the most important features of local culture, but it also contains information about creative potential. Publishers, in co-operation with the author, are the innovators of literary communication and are also indicators of the openness to models of cultural and creative industries. However, changes in technology and the intensification of digitalized communication have not radically changed the role of the book, especially in the field of 'beautiful literature'. Literature has ceased to be a limited social phenomenon, as it used to be considered when literature only included works valued by the elite. Literature has become a mass communication phenomenon.[9]

This chapter analyses the innovative literary work *Ars Horvatiana*, which created publishing products closely related to book cataloguing (for example, applying 36 lemmas on the central theme of the novel in the novels *Vilikon* and *Vilijun*) and popularizing three different cultural contexts: the context of the Glagolitic culture, the Central European culture, and the context of European-Chinese cultural cooperation. All three cultural contexts are analysed in the prism of four literary texts: *Az, Bizarij*, *Vilikon/Vilijun*, with special emphasis on the *Vilijun* topotheque as the first public, digital archive of a novel (the *Vilijun* topotheque was established in 2017 for the novel *Vilijun*).

Materialization of cultural heritage by creating the *Ars Horvatiana* opus

Consideration of the influence of the materialization of cultural heritage by the creation of an opus is theoretically and practically evident in the poetics of the author Jasna Horvat, which Dubravka Oraić-Tolić, who wrote the epilogue for the novel Vilijun,[10] named with the prestigious syntagm *Ars Horvatiana.*

> In literary criticism and theory, and now certainly with the public, there is
> a clear idea of the poetics of Jasna Horvat. The features of this poetics are:
> connecting literature and science, a love for mathematics and magic of
> numbers, and postmodernist strategy of intertextuality, citation and
> intermediality, but also, unlike postmodernist superficiality, an interest in

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[8] Fedor Rocco, *Poslovni marketing: business to business* (Zagreb: Školska knjiga, 1998)

[9] Robert Escarpit, *Revolucija knjige* (Zagreb: Prosvjeta, 1972)

[10] Jasna Horvat, *Vilijun* (Zagreb: Naklada Ljevak, 2016)

the great themes of writing, history, culture, heritage, identity. The secret of the poetics of Jasna Horvat–conceptuality.[11]

Along with the consistency in conceptuality, the secret of poetics of Jasna Horvat is manifested in the use of literary expression as a means of archiving and popularizing heritage and scientific themes. The intangible cultural heritage materialized in the study novels of Jasna Horvat is divided into several thematic circles: mythology (*Izgubljena vila*, *Alemperkina kazivanja* and *Krijesnici*, Glagolitic script–*Az* and *Alikvot*, the Central European city Osijek–*Krijesnici*, *Bizarij*, *Auron*, *Alikvot*, *Pismo u pismu*, *Antiatlas* and *Atanor)*, travel and autobiographical prose (*Pismo u pismu* and *Antiatlas*, the Silk Road–*Vilikon* and *Vilijun)*, and scientific and artistic experimental studies (*Ars Andizetum*). This chapter explores three conceptual themes related to intangible heritage goods: Glagolitic script, dealt with in the novel *Az*, historical figures as the determinants of Central European cultural context presented in the novel *Bizarij*, and the heritage teachings on the cultural connection between Europe and the People's Republic of China, presented in the novels *Vilikon* and *Vilijun*.

Literary promotion and teading Glagolitic script: *Az*

The novel *Az*[12] was the winner of the prestigious award of the Croatian Academy of Sciences and Art for 2010, which was presented to the author in 2011. A vast number of reviews that accompanied the publication of this text have, in many ways, confirmed that it is a study novel promoting the heritage script.

> The phenomenon of the Glagolitic script, which shaped Croatian literature and culture in the earliest period of its development, as well as the significance of its connection to the Cyrillo-Methodian tradition, which is reflected in the preserved monuments of Croatian literacy, are the main themes of the novel *Az*, which the author named after the first letter of the Glagolitic alphabet, but also the first word of one of the most famous and oldest Croatian literary monuments–*the Baška tablet* (from c. 1100). Inspired by the meaning of the Glagolitic script in the development of Croatian culture, as well as in the awareness of our identity, in writing the five-part structure of her novel, Jasna Horvat talks about the life of Constantine the Philosopher or Saint Cyril in a new, postmodernist way. The unusual structure of the novel by Jasna Horvat in the final part

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[11] Dubravka Oraić-Tolić, "Ars Horvatiana," Epilogue in: *Vilijun,* Horvat, Jasna (Zagreb: Naklada Ljevak, 2016): 209.
[12] Jasna Horvat, *Az* (Zagreb: Naklada Ljevak, 2009)

completely deviates from the novelist mode of expression, emphasizing that its aim was not only to write a novel about Constantine Cyril and his Glagolitic alphabet, but rather that she wished to write a short study on this script, which is included at the end of the novel, pointing out to the reader that anything is possible in the postmodernist novel, including that it may be transformed into a professional paper, perhaps even a scientific one.[13]

The ambition of this text was recognized by other literary and cultural theorists, namely Lukić and Krezić, who used entirely new syntagms to describe the phenomenology of this literary text:

a romance study of the Glagolitic,[14] a historical-hagiographic novel,[15] a ludico-mathematical novel,[16] a text cosmogram,[17] a proponent of the heritage-identity story of Croatian (and Slavic) medieval linguistic-literary culture and a philologically and grammatically coded biography of Constantine Cyril of Thessaloniki.[18]

The same authors emphasize that the novel *Az*:

has so far been the subject of numerous focused discussions, presentations, workshops, symposium submissions and lectures in the Republic of Croatia, always with a great response from interlocutors and the audience. One of the most notable examples of how much the novel *Az* contributed to the popularization of the Glagolitic script and its redefinition as part of new scientific and artistic practices was a lecture held on 29 March 2016 in Osijek, titled *Glagoljica rediviva–a new linguistic culture paradigm.*"[19]

The final influence of the novel *Az* is evident in three events that it (in)directly initiated: a) the proclamation of the Glagolitic script as

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[13] Mato Nedić, "Romansirana studija o glagoljici," *Motrišta*, 55-56 (2010): 114-115.
[14] Ibid.
[15] Dunja Detoni Dujmić, *Lijepi prostori: hrvatske prozaistice od 1949. do 2010.* (Zagreb: Naklada Ljevak, 2011)
[16] Andrijana Kos-Lajtman, "Tekstualni kozmogrami Jasne Horvat: ustrojstvo Svijeta i Jezika kao geometrija teksta," *Kolo: časopis Matice hrvatske*, 20,1/2 (2010): 225-232.
[17] Andrijana Kos-Lajtman, "Ontologija stvaralačke igre u romanu 'Az' Jasne Horvat," *Riječ*, 16,1 (2010): 218-233.
[18] Milica Lukić, and Blažević Krezić, *NOVA VITA GLAGOLITICI–Glagoljica iz perspektive znanstvenih, kulturnih i kreativnih praksi* (Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Filozofski fakultet, 2018)
[19] Ibid.

intangible cultural heritage in 2014; b) the publication of high school textbooks and readers of the Croatian language inspired by the novel *Az*;[20] and c) the translation of the novel *Az* into English (Figure 14-1).
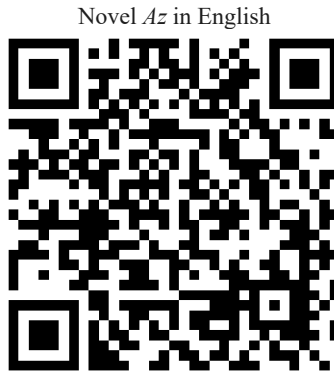
Novel *Az* in English

Figure 14-1. QR code of the novel *Az* in English

Without considering the literary features of the novel *Az,* despite their recognition by the Croatian Academy of Sciences and Art, it can no doubt be inferred that the literary text has succeeded in encouraging the popularization of the Glagolitic script and intensifying the scientific and cultural possibilities of its use, particularly within the creative industry. Or, as stated by Lukić and Krezić,

> Jasna Horvat's *Az* offered us a literary text architecturally designed into a work of art, but not one which protects us from the truth in a Nietzschean fashion, but a work of art that invites us to live the truth in its entirety. The title of this literary text (az(ъ)–Old Slavic lexeme for a personal pronoun– and the first letter of the Glagolitic alphabet) invites us to ask ourselves who we are, both as individuals and as a people, while its contents give us the identity answer to our inclusion in the Word originating from Letters.[21]

The novel *Az,* and the thematization of the Glagolitic script, are present in other prose texts by Jasna Horvat. Thus, for example, in the novel *Alikvot*,[22] Horvat writes about the construction of the alphabet string of

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[20] Snježana Zrinjan, *Az*, *Buki*, *Vjedi*: *hrvatska čitanka i udžbenik za srednje strukovne škole* (Zagreb: Alfa 2014)
[21] Lukić, and Krezić, *NOVA VITA GLAGOLITICI*, 202.
[22] Jasna Horvat, *Alikvot* (Zagreb: Algoritam, 2014)

Constantine Cyril, and each chapter of the novel begins with painted Glagolitic numbers (Figure 14-2). Two years later, the novel *Vilijun* presented its readers with a 'vector reading' of the Glagolitic string, as well as a coded message written in the catalogue of lexicon entries on locations along the Silk Road (Figure 14-2).

As can be noticed, the continuation of the *Ars Horvatiana* opus has built a catalogue of knowledge and interpretation of the Glagolitic script in technologically diverse forms.

Calligraphic form of Glagolitic numbers from the novel *Alikvot*
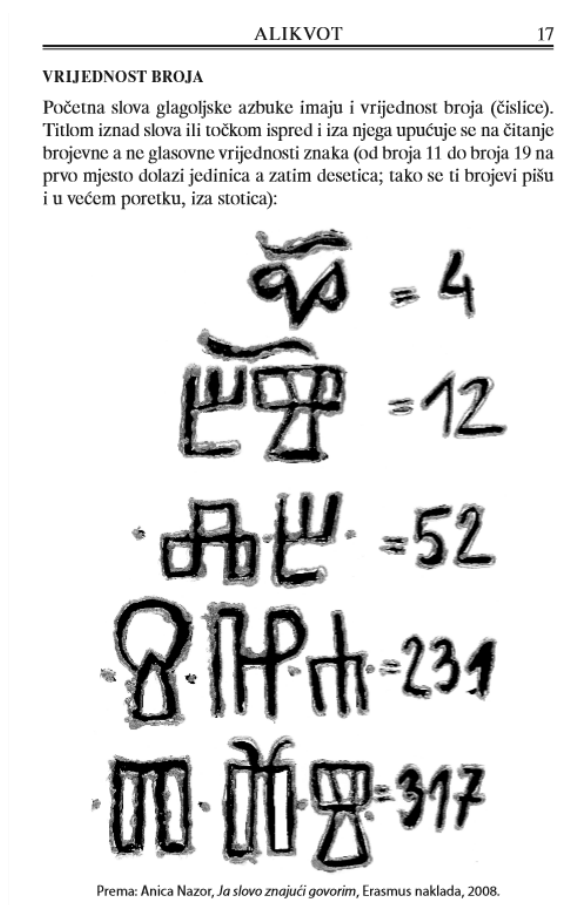
Source: Horvat, Jasna. 2014. *Alikvot*, p. 17.

Vector form of Glagolitic characters from the novel *Vilijun*

Source: Horvat, Jasna. 2016. *Vilijun*, p. 103.

Figure 14-2. Example of paragraphs from the novel *Alikvot* and 'vector reading' of Glagolitic characters from the novel *Vilijun*

Historical figures as the determinants of central European cultural context: *Bizarij*

In addition to the Glagolitic cultural context, the Central European cultural context is of great importance for the territory of the Republic of Croatia. All the cultural contexts that are not mentioned build cultural identity and represent an important segment of the cultural and creative offers of a community. As the offer of the creative and cultural industries is extremely prone to adaptations of heritage themes, each of the products/services of cultural and creative offers may be directly or indirectly related to the consumption of materialized 'products' of intangible cultural heritage, and directly or indirectly related to the material legacy of historical figures. Thereby, the novel *Bizarij*[23] is considered as a form of cultural documentarism, and the existing preserved objects, and other relevant historical monuments as part of the cultural infrastructure in the context of the industry of cultural and creative projects.

The author devoted the novel *Bizarij* to all her previous and future fellow citizens, and 15 characters (with the exception of one house) are structurally presented as 15 chapters, named in close connection with the meaning of conjunction words in Croatian grammar. As Kos-Lajtman observed:

> The novel was conceived under the umbrella concept of the Romanesque lexicon of Croatian conjunctions, i.e., it was lemmatized in such a way that its global structure was determined by a system of independent and dependent conjunctions in the Croatian language. The conjunctions are the headings of individual chapters within the two major parts of the novel, whose function is consistent with the function of the lemma in real, lexicographic dictionaries or lexicons. It is important, however, for such titles/lemmas to enter into a meaningful relation with the story presented in each chapter, and just like in the novel *Az*, it establishes a type of iconic relationship between the formal concept and the semantics that the concept mediates.[24]

The iconic conceptuality of the novel *Bizarij* can be seen, not only in its structure, but also in the choice of the character of the actors. Namely, in order to justify the name of the novel, which in the allegorical sense signifies *a collection of the bizarre*, Jasna Horvat describes each of the

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[23] Jasna Horvat, *Bizarij* (Zagreb: Naklada Ljevak 2009)
[24] Andrijana Kos-Lajtman, *Poetika oblika* (Zagreb: Naklada Ljevak, 2016), 106.

chosen characters in their shift from the 'average'–a term that points to the author's main profession: statistics, according to Buljubašić.

> *Bizarij* consists of fifteen stories in which the characters are interconnected with Osijek as a kind of axis–a centre of their life orientation. By choosing bizarre figures and locating them in the city of Osijek, it is possible to visualize a new approach in the conceptualization of the new historical novel.[25]

The novel *Bizarij* expresses the author's commitment to the *Oulipo* practice, according to which literature is developed from a system of *constraints*–guidelines that simultaneously *determine* and *limit* the literary text. Having found the *definition* of binding (to a city) in the grammar of the Croatian language, Jasna Horvat, in the novel *Bizarij*, limited herself with the construction of a text defined by Croatian language and urban historiography. Thus, the novel *Bizarij* gave the city Osijek an identity built on the basis of two catalogues–the catalogue of *language knowledge* and catalogue of *history of the city* Osijek. The writer of the novel's epilogue, Milica Lukić, states that such an authoritarian approach makes the readers recognize the historical figures from (inter)national and local history in the characters of *Bizarij* (historically verified and confirmed): Constantius II, Isabelle von Habsburg, Ivan Korođ, Nikola Zrinski, Maximilian Gosseau de Heneff, Eugene of Savoy, Suleiman the Magnificent, Ilija Lekić, Antun Berhard, Adela Dessaty, Adolf Waldinger, Paulina Hermann Mačkamama, Marija Pejačević, and Vladimir Lendić Ranko. The novel *Bizarij* is an example of how real people become part of the intangible historiographic heritage, and are, at the same time, contemporary links with the spaces and cultures from which these historical figures originated, and who formed this city. Literature permanently adds the Central European cultural context into the contemporary cultural offer of the city as a product of the creative industry.

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[25] Ivana Buljubašić, "Recikliranje fakcije kroz fikciju: Osijek u Bizariju," in: *Sanjari i znanstvenici, Zbornik u čast 70-godišnjice rođenja Branke Brlenić-Vujić* (Osijek: Sveučilište J.J. Strossmayera u Osijeku, Filozofski fakultet, 2013), 707-724.

The link between Europe and the People's Republic of China: *Vilikon and Vilijun*

The increasing number of published texts combined under *Ars Horvatiana* reveal the author's wit in the various methods of literary interpretation of heritage works, whose umbrella themes are specified in the headings. Although Jasna Horvat does not abandon the catalog of knowledge specified in the 'indices' placed just after the literary text, many texts by Jasna Horvat incorporated catalogs of knowledge into a central literary form. Such examples are the novels *Vilikon*[26] *and Vilijun,* unique in Croatian contemporary prose, not only by the way they catalog heritage works but also by their interconnectedness. Namely, the novel *Vilijun* is, according to Oraić-Tolić, "a conscious, planned and thematically overdeveloped permutation of the novel *Vilikon*",[27] or, according to Kos-Lajtman, its "alternative counterpart."[28]

Magic square number 12 – the basic framework of cataloging in the novels *Vilikon* and *Vilijun*

Magic square of the number 12 placed into Croatian interlace
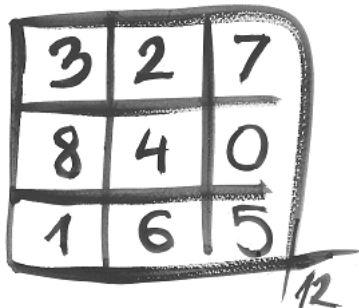
Source: Horvat, Jasna. *Vilikon.* 2012, p25 and *Vilijun.* 2016, p49
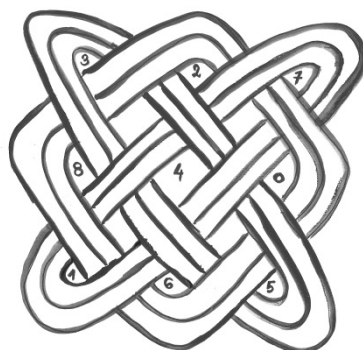
Source: Horvat, Jasna. *Vilikon.* 2012, p44 and *Vilijun.* 2016, p246

Figure 14-3. Magic squares in the novels *Vilikon* and *Vilijun*

In both of these texts, Jasna Horvat used a magic square of the number 12 as a structure/model for entering selected lemma within a novel (Figure 14-3). In addition to the magic square of the number 12 as a code for the

[26] Jasna Horvat, *Vilikon* (Zagreb: Naklada Ljevak, 2012)
[27] Oraić-Tolić, "Ars Horvatiana," 211.
[28] Kos-Lajtman, *Poetika oblika*, 199.

implementation of cataloguing, the novels *Vilikon* and *Vilijun* are also related by the 'story loop', which is presented in both texts in almost identical terms. Subtle differences are justified by the functionality of the narrative material, depending on the heritage lemmas catalogued by the magic squares.

Oraić-Tolić described the complexity of the structure in the following way:

> *Vilikon* contains three compositional layers: a thin autoreferential border (part of the introductory and two final chapters), a framework fictional narrative of conversations and encounters of the Croatian traveller Marco Polo and the Mongolian ruler Kublai Khan, and finally, as the central part of the novel, fairies (*vile*) for which the novel was named (*vili-kon*), and it has already become part of genre of novel-lexicon.[29]

Both alternates/counterparts–*Vilikon* and *Vilijun*–can be labelled as novel-lexicons with a total of 36 lexicon entries. However, their definition is far more demanding, and is derived from the fundamental structure of the novel *Vilikon*. In Oraić-Tolić's words:

> The hybrid genre, seamlessly combined from fictional and lexicon narrative, is permeated by the mystic Luddism of the *magic square of the number 12* at all levels. The magic square consists of three horizontal and three vertical fields in which the numbers in all directions, vertically, horizontally and diagonally, add up to 12. The magic square of the number 12 is the key to the overall structure of *Vilikon,* and also a guide for the reader's imagination for finding it in all parts of the novel. The chapters of the novel are divided by the rows and fields of the magic square, so the novel consists of three main parts named by the vertical rows (first, second and third rows), and these 'rows' have chapters named by the horizontal fields (in the first row, for example, Fields 3, 2 and 7). A total of 36 fairy tale stories, that is 3x12, are told to the great Khan, which is also the same number of advices from the *Fairy Book of Births*, and the same number of advices on natural phenomena, herbs, time and everyday life, while the number of health advice is 109, i.e., 9x12. Marco writes the magic square into the Croatian interlace at the end of the tale, and so connects the national heritage symbol with Far Eastern culture, with Khan himself.[30]

Permutation is probably one of the motives which prompted Jasna Horvat to (re)write the already published template of literary archiving

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[29] Dubravka Oraić-Tolić, "Konceptualna magija pripovijedanja," *Republika: mesečnik za književnost, umjetnost i društvo*, LXIX, 6, June 2013, 93.
[30] Ibid., 94.

realized with the novel *Vilikon*. Each analyst of these two texts would find it equally demanding to describe the similarities and differences between these two texts. Kos-Lajtman summarizes them as follows:

> It is not difficult to see the similarity between the titles *Vilijun* and *Vilikon*– the link between them is the noun *vila* (fairy) or *vile* (fairies). However, while, in *Vilikon*, fairies are the umbrella theme of the whole novel elaborated in its aspects, especially folkloristic and ethnological, with the methodology of lexical elaboration, in *Vilijun,* fairies, above all, signify an intertextual link to the novel which preceded it, and which is, interestingly, related to it in all its key elements except in the theme of the fairies themselves. In other words, the themes of the fairies (in the first novel) or the Silk Road (in the second) become distinctive points of *Vilikon* and *Vilijun*, conceptual novels that function as a sort of alternative counterpart, as permutations of the same textual code.[31]

Buljubašić, on the other hand, presents the theoretical clarification of these two texts as follows:

> Vilijun is not, as could be implied by its counterpart and predecessor of a kind Vilikon from 2012, a second, expanded or revised edition. It is a novel that demonstrates the power of the permutational skill of fitting a new text into the framework of the present, which, of course, begs the question of textual self-sufficiency of the framework narrative text, whose focus in both novels is the dialectical form of Marco Polo and Kublai Khan, and the magic square, in whose fields lexical entries and notes are written out. In mathematical terms, the magic square would be called a function, a sort of algorithm that spreads a named umbrella theme through a particular pattern into a novelesque narrative solution. In other words, Vilijun requires consideration of two novels born from one function–the magic square of the number 12. These novels are the result of the same function, stemming from the principle of stacking text along the fields of the magic square. The mathematical function is actually a mapping of various elements from the domain to the elements of the co-domain, but by an exact algorithm, which is in this case a magic square algorithm of the number 12. In the case of Vilikon, the domain name is denoted by the *knowledge of the fairies*, and the magic square is used to map folklore, historical, and oral literature forms, into 36 narrative lexicon themes about fairies. In Vilijun, the same manner of mapping, i.e., the same magic square function of the number 12 is used to develop the theme of the Silk Road, as well as the characteristics of the homelands of Marco and the Khan, in 36 narrative sections, with Marco's intimately coloured visions of

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[31] Andrijana Kos-Lajtman, "'Magični kvadrat' romana: Vilijun, prvi hrvatski QR roman," *Hrvatska revija: časopis Matice hrvatske,* 4 (2016): 56-59.

the Kingdom of Croatia, the empire of the Khan and the path leading up to his empire. Within the Oulipo context, that function is a constraint which always produces a new text using the same writing method, a tool of equal strategic (self-)restriction with a different final product, resulting in novels which are mappings of different thematic elements with similar joint outcomes. In a word, Vilikon and Vilijun are results of the same function–the magic square of the number 12–which within the context of Oulipo constraints can be called magical mapping.[32]

Vilikon and *Vilijun*, in any case, exemplify the possibilities of literary archiving of thematically diverse heritage lemmas united in the same literary story loop. Their permutation in both cases includes 36 lexicon entries, and the conditionality of choice for each of the entries was given by Jasna Horvat in the motivation of her heroes to relive themselves from completely altered catalogue vistas.

Digital Archiving of Literary Opus:
Topotheque of the novel Vilijun

After performing the permutation of her own expression, Jasna Horvat reached for another form of cataloguing, and, in 2017, built the first digital archive of Croatian literary text–topotheque of the novel *Vilijun*. As stated by Lemić, contemporary public archives are considered as information and service institutions available to broader segments of society, actively participating in cultural life and shaping community identity, open to diverse research, and developing partner relationships with creators and users. They are also active partners in cultural, scientific, and social affairs, and act as part of a wider network of educational and cultural institutions which seek to educate society and evoke common heritage. Accordingly, archive activities are increasingly aimed at digitizing and expanding the availability of archival resources, and linking them with other information sources in order to create joint user content and cultural heritage networks. Most current projects, from the field of culture, science and education to the development of all information society components, are based on the concept of availability of resources, information and services to all, developing and improving access to digital and online

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[32] Ivana Buljubašić, "Interaktivni roman premrežen QR kodovima," *Quorum: časopis za književnost*, XXXII, 1-2-3 (2016): 392.

information sources, and the development of information portals, databases and e-services.[33]

The digital platform Topotheque was built within the framework of a creative network of archives and users within the project *co:op– community as opportunity: the creative archives' and users' network*. This international project was funded by Creative Europe, and brings together 17 archival and scientific institutions from 11 European countries, with the goal of strengthening transnational cooperation between institutions and user groups. The project started in 2014 with the following partners: Hessian State Archives in Marburg, ICARUS, National Archives of Hungary, Budapest City Archives, National Archives of the Czech Republic, Croatian State Archives, Swedish National Archives, National Archives of Finland, National Archives of Estonia, General Directorate of the Archives in Munich, Archives of St. Pölten, Historical Church Archives in Biscay, Complutense University of Madrid, University of Naples Federico II, the University of Graz, the University of Cologne, and the Institute for Balkan studies SASA, bringing together more than 40 associate partners across Europe. It was also an extension of the international project ENArC (European Network on Archival Cooperation), which took place in 2010-2014 with the aim of raising awareness of the significance and incorporation of the archival heritage of Central and Southeast Europe into the contemporary European network of written cultural heritage, and strengthening archival cooperation across Europe.[34] The Topotheque is based on linking the creators of archival material to institutions that guard it, i.e., to link heritage institutions to the communities in which they operate. Collaboration is carried out by organizing public programs (historical lectures, workshops, and other types of events) in interaction with local institutions and individuals who have archive material, to create a local archive of local history and/or themes. The digital platform Topotheque[35] was developed for this purpose, and enables easy digitization and publishing of various historical sources (photos, documents, printed materials, AV records) and the use of interactive IT tools for their description, presentation and search. The platform is maintained by ICARUS, and partners within the co-op project are members of ICARUS, as are all other interested parties who promote

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[33] Vlatka Lemić, "Mogućnosti suradnje arhiva i zajednice: co:op project," *Glasnik arhiva i Arhivističkog udruženja BiH*, 46 (2016): 107-109.

[34] co:op–community as opportunity: the creative archives' and users' network, list of partners, accessed May 18 2018, https://coop.hypotheses.org/category/project-partners.

[35] Topotheque Platform, accessed May 18 2018, http://www.topotheque.eu/.

the use of Topotheque in the construction of local archives that bring together materials, memories, and knowledge, dispersed in a variety of private, local and other forgotten sources.

The topotheque of the 'smart' novel, *Vilijun*, was opened to the public on June 20 2017. It is a private collection in which the author of the text advertises the archival material whose classification is various:

- parts of the text,
- illustrations in the novel,
- recordings of presentations,
- photographs from presentations,
- media texts,
- literary and theoretical reviews,
- guest appearances at book fairs (Beijing Fair, Interliber, the inauguration EU-China Literary Festival in Beijing and Chengdu),
- footage of rehearsals for the premiere performance of the play based on the novel *Vilijun*,
- footage of the premiere performance of the play *Vilijun*,
- interviews with the author.

Figure 14-4 shows the website of the topotheque of the novel *Vilijun*.
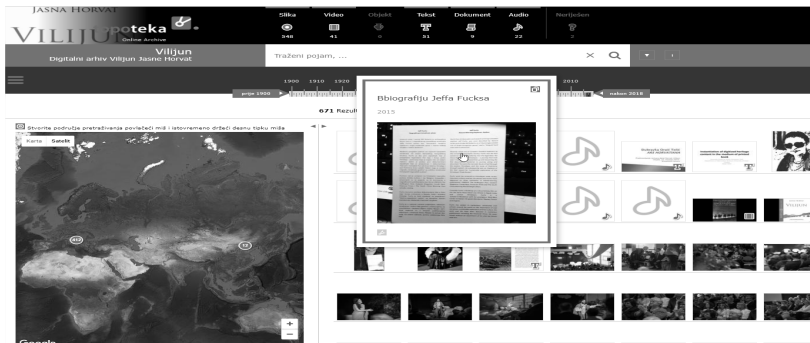
Figure 14-4. Topotheque of the novel *Vilijun*[36]

Vilijun has been identified by critics as the first QR novel, and the first 'smart' novel whose reading requires the use of a smartphone. The annotation of the novel on the publisher's website reads as follows:

[36] Source: Website of the topotheque of the novel *Vilijun*, http://vilijun.topothek.at, accessed May 14 2018.

The protagonists of *Vilijun* are Marco Polo and Kublai Khan in the year of their parting. Marco Polo tells Kublai Khan about the towns along the Silk Road, and Kublai Khan is listening to Marco Polo with interest, in order to decide whether to allow him to return to his homeland. It is an amalgam of two nomads and two cultures within which Marco Polo describes numerous other cultures he met on the Silk Road. It is a novel about nomadism–both in thought and travel, but also about trust, friendship and loyalty.[37]

The *Vilijun* topotheque is a new step in text interactivity that enables paper and web travel through locations along the Silk Road. Given that the *Vilijun* topotheque is the digital archive of a novel that is also a transmitter of heritage memory, it can be labeled as a double archive, or an archive within a literary archive. The *Vilijun* topotheque is a unique archive in many ways–it preserves a variety of archival material (presentations, plays, newspaper articles, book fair appearances, thematic talks, published cultural and literary criticism, scientific papers) documenting the life of a literary text, consisting of all kinds of media (photographs, documents, AV records, etc.), and covers already created, but also still unseen, documents. We do not know when they will be created, what they will be like, and what kind of ideas will inspire them. A living, timeless public archive that, through the theme and life of the novel *Vilijun*, connects the story and the characters, readers, scientists, artists, users, and all those whose paths meet with it at some point. The *Vilijun* topotheque is the archive of the 21st century information society, and is also a new form of promoting heritage themes and the novel itself as a product of the creative industry.

Conclusion

Literature is a medium of intensified communication with which heritage contents are promoted, and, in the global age, become widely available to interested readers. The literary text also speaks through its publishing means, which contribute to its innovation and attractiveness to the readership community. Innovation in presenting heritage content, through discovering new forms and creating texts that are a sort of heritage knowledge 'catalogue', is a prerequisite for reviving heritage in the new age.

In the digital environment, the author and publisher expand their traditional roles under the influence of technology. Digital communication

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[37] Website of the publisher Naklada Ljevak, accessed May 14 2018, http://www.ljevak.hr/knjige/knjiga-20935.

is becoming more and more important, and its impact is reflected in both textual design, as well as the adaptation of heritage themes. Editing and text design are becoming means of communication that expand the literary message. The traditional skills of publishers are the basis for their upgrading by adopting and discovering (their own) innovative solutions. One of the innovative solutions is QR code as a connection to a printed literary text, with links for the reader selected and recommended by both the author and publisher.

Such publishing design, in which connections between the printed literary text and the digital environment are realized, are 'smart' texts, and one of their qualities is uniting the author and publisher in a joint effort to offer a literary text adapted to the technology of the new age. A key determinant of 'smart' texts is that they do not abandon any of the known technologies (as opposed to e-books). Such a novelty shows that technological progress does not imply the rejection of tradition (reading, shaping), or even heritage.

All this clearly points to the thesis that the virtual age is one in which the consumer (reader and/or book buyer) appears as a key promoter of the book. In other words, now more than ever, the publisher has been instructed to communicate with the reader. In this communication, the reader/buyer already has control, he is loud, and his voice reaches a vast number of other readers; future customers.

The publishing practice in the Republic of Croatia has shown that, despite a small market, it is successfully following changes in the technology of producing beautiful literature and realizing its own publishing novelties. Confirmation that Croatian publishing is globally interesting is its representation across Europe and in the People's Republic of China. Such publishing products promote tangible cultural heritage in extremely large cultural communities, thereby further protecting the endangered intangible cultural heritage of a small cultural community such as Croatia. Thus, the underlying principle of the UNESCO Convention is realized, namely that the global protection of cultural identities can be achieved through the exchange of cultural products of the creative industry, based on sources of intangible cultural heritage.

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CHAPTER 15

(IN)VISIBILITY OF BOSNIAK AND CROATIAN CULTURAL TIES AND RELATIONS, AND THE POSSIBILITY OF THEIR REPRESENTATION IN THE CONTEXT OF DIGITAL HUMANITIES (SPECIAL REFERENCE TO THE JOURNAL *BEHAR*)

LEJLA KODRIĆ ZAIMOVIĆ
AND SANJIN KODRIĆ

Abstract

Bosniak and Croatian culture are interconnected in different areas, including the area of cultural heritage, while in certain periods of time, these ties and relations have been of crucial importance for both of these cultures. This was the case especially after the Austro-Hungarian occupation of Bosnia in 1878, when Bosnia, after over four centuries of Ottoman administration, had been reintroduced to modern Western-European culture and civilization, leaving behind its previous Oriental-Islamic context as its primary setting and cultural and historical framework. In this regard, the aim of the paper is to shed light on the processes of the pro-European acculturalization of Bosnia, in which Croatian culture acted as the first neighboring Western-European type culture for Bosnia. Importantly, traces of these cultural ties and relations have been preserved in Bosniak journal production of the late 19th and the early 20th centuries, including the most significant Bosniak literary and cultural journal of the age, entitled *Behar* [*Blossom*] (1900-1911), which also includes texts from Croatian authors of the time. Among other issues, this chapter provides concrete examples of the role of Croatian authors in poetry, prose and translation in *Behar*, all seen in the context of

the epistemological framework of the digital humanities, while pointing simultaneously to new possibilities of studying both the history of literacy, and the history of literature, including literary journals as a part of the (inter)cultural heritage.

Introduction: From traditional to digital humanities

Bosniak and Croatian culture are interconnected in different areas, including cultural heritage. These ties and relations are essentially of intercultural character, and, depending on the period, they have provided mutual benefits for both cultures. Among other periods, this was the case especially after the Austro-Hungarian occupation of Bosnia in 1878, when Bosnia, after over four centuries of Ottoman administration, had been reintroduced to modern Western-European culture and civilization, leaving behind its previous Oriental-Islamic context as its primary cultural and civilizational framework. In these processes of pro-European acculturalization of Bosnia, Croatian culture played a key role as the first neighboring culture to Bosnia of Western-European type, making it the first immediate source of 'Europeanisms' in post-Ottoman Bosnia. Important traces of these cultural ties and relations have been preserved in the Bosniak journals of the late 19th and early 20th centuries, including the most significant Bosniak literary and cultural journals of the time, primarily the journal *Behar* [*Blossom*] (1900-1911), which also contained texts by numerous Croatian authors of that period.

The traditional approach to cultural heritage failed to provide sufficient insight into these important cultural ties and relations. Conversely, interdisciplinary approaches to cultural heritage, and particularly ones that are made possible by digital humanities, especially in the case of literary and cultural journals as a special form of cultural heritage, open new insights into these important issues, particularly the issues of understanding and presenting the cultural development and cultural ties and relations between Bosniaks and Croats in the late 19th and the early 20th centuries. In the traditional paradigm, these issues were insufficiently visible, primarily due to the epistemological limitations of traditional humanities, or, among other reasons, for being enclosed in the framework of the primarily traditional literary history, as well as in the framework of essentially narrow, traditional literary-historical disciplines such as Bosnian and Croatian studies, in the

same fashion as other South Slavic literary historiographies. Namely, their point of view includes an absence of wider interdisciplinary research and presentation of research results, and first and foremost, the individual research of the Bosniak or Croatian literary past. This specifically refers to the state of literary and historical studies after the dissolution of the former Yugoslavia, when the borders between Bosnian and Croatian studies, as well as other South Slavic disciplines, widened, and, consequently, the possibilities of interdisciplinary research narrowed.

All of these changes had a significant impact on the contemporary digital humanities in the Post-Yugoslavian South Slavic cultures. Here, the boundaries between literary-historical disciplines, such as Bosnian and Croatian studies, or other disciplines in South Slavic studies, became blurred. Moreover, the borderlines between literary history and other related areas, including information sciences, also became distorted. Therefore, from the perspective of the digital humanities, the preconditions for a new, more appropriate renewal of integral South Slavic studies were created, for example, in the form of comparative and cultural South Slavic studies, all in accordance with, on the one hand, the nature of literary and cultural ties and relations in the wider South Slavic area. On the other hand, the literary-historical studies are connected to other related studies in a new manner, again in congruence with the nature of the literary and cultural practice that is being discussed. Exactly in relation to this, and contrary to the traditional humanities paradigm, the digital humanities create some of the basic preconditions for a final integral research recreation of both the cultural and the literary past, making this possible at a significantly higher level than in the traditional humanities. This is, among other issues, the case in the context of presenting the integrality of literary and cultural processes and phenomena, without strict disciplinary and other traditional boundaries, and without closing the observed matter in this, basically exclusive framework.[1] In this manner, the literary and cultural past is provided with the option of revival, or there is an opportunity for a new presentation of all complex literary and cultural processes and phenomena from the past in their full scope, which eventually leads to more complete insights into the past itself, and thus to the opportunity of generating new humanistic knowledge, which, however, used to be invisible to the traditional humanities.

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[1] See e.g., Lejla Kodrić, *Digitalne informacijske usluge u baštinskim ustanovama* (Sarajevo: Biblioteka Sarajeva 2010)

Past revisited: Bosniak and Croatian ties and relations in literature and culture

Although the topic of Bosnia in Croatian culture and literature has been addressed in older Croatian cultural and literary heritage, as well as in the modern Croatian cultural and literary practice, particularly since the famous travelogue *Pogled u Bosnu* [*A View into Bosnia*] (1842) by Matija Mažuranić, and the more famous epic *Smrt Smail-age Čengića* [*Death of Smail-aga Čengić*] (1846) by Ivan Mažuranić, were published, relations and ties between Bosniak and Croatian culture and literature intensified in the second half of the 19th century. From the Croatian perspective, this was already the case during the period of the Illyrian Movement and the Croatian National Renewal, when, under the influence of exactly these ideas, among other incentives, the first Bosnian-Herzegovinian literary journal emerged—the famous *Bosanski prijatelj* [*Bosnian Friend*] (1850) edited by Father Ivan Franjo Jukić—, in which, next to its other content, there were many examples of Bosniak oral literature; certain evidence of Europe's arrival into Bosnia in the 19th century. The Illyrian Movement and the Croatian National Renewal especially echo their time, where it was the most expected–in the Catholic-Croatian literary creation and cultural practice in Bosnia-Herzegovina. However, the assumption that this also reflected, at least to a certain extent, in the literary work of Bosniaks in this period is not excluded, for example in their Alhamiado literary works written in the Arabic script, and in other cultural practices of the time, where new, basically equivalent, ideas of National Renewal were created, especially in the context of a wider affirmation of literary and cultural creation in the national culture, Bosnian language among Bosniaks.[2]

However, the true turning point in Bosniak and Croatian literary and cultural relations and ties was the change of Ottoman overlordship with Austro-Hungarian rule in Bosnia in 1878, when Bosnia, after over four centuries, stepped out of the Ottoman government, but also from the immediate context of Oriental-Islamic culture and civilization, and faced the Western-European order in the most direct manner, as its new cultural and civilization framework.[3] At that time, in relation to Bosnia, Croatia stopped being the multi-centurial 'antemurale Christianitatis' and became the first, and immediate, starting point for the Austro-Hungarian, so-called,

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[2] See e.g., Sanjin Kodrić, "Preporod prije preporoda? (Pjesma *Pozdrav* 'gospodina hodže Mehmed-Emin-Efendije' i počeci novije bošnjačke književnosti)", *Radovi*, 18 (2015): 45-80.
[3] See: Mustafa Imamović, *Historija Bošnjaka* (Sarajevo: Preporod 1997), or Smail Balić, *Kultura Bošnjaka: Muslimanska komponenta* (Zagreb; Tuzla: R & R 1994)

'civilization mission' in Bosnia, which was, generally speaking, one of the official pretexts which the Austro-Hungarian Monarchy in the Berlin Congress used to occupy Ottoman Bosnia. In this way, in Austro-Hungarian Bosnia-Herzegovina in the late 19th and the early 20th century, Croatian literature and culture became one of the most direct models for the Europeanization of Bosnia, including the Bosniak literary and cultural creation, all in accordance with the imperial policy of the Austro-Hungarian Monarchy. In this process, the Croatian cultural system acquired a very significant, not just literary and cultural, but also a wider, social, role, which will go in favor not just of the official Vienna, but also of the entirety of Croatian literature and culture of the time, especially considering its own aims from the period of the Illyrian Movement and Croatian National Renewal. In the language of postcolonial theory and criticism, it is, among other issues, a matter of the Austro-Hungarian 'textual colonization' of Bosnia which was realized directly via Croatian literature and culture, even though, in another context, Croatian literature and culture had previously been colonized in a similar way by the ruling Austro-Hungarian literary and cultural model. And this, without a doubt, sheds new light on the entirety of Croatian literature and culture, and also its character and role in the late 19th and early 20th centuries, in the context of both Croatian and, naturally, Bosnian studies.

The so-called Croatian course in Bosnia is especially underlined for the first time after the Austro-Hungarian occupation, that is, during the time of administration of the general Josip Filipović, the commander of the Austro-Hungarian military forces during the occupation,[4] and it is precisely the moment when Croatian culture, and particularly literature, started to realize itself as the Europeanization model in Bosnia, including Bosniak literature and culture. For example, at that time, on the heels of the occupation of Bosnia, the *Bosansko-hercegovačke novine* [*Bosnian-Herzegovinian Gazette*] (1878-1881) was established, in which the texts from various Croatian newspapers and journals of the time were reprinted, and which included Croatian authors as well. While one of the aims of this periodical was a rapprochement with the Bosniak-Muslim populace to acquire its approval for a more comprehensive acceptance of the 'new era', especially at a moment when Bosniaks were still predominantly mourning the 'Turkish vakt', or their 'Turkish era'. The main goal was to integrate Bosniaks more thoroughly and expediently into the new Western-European order, including the new Western-European literacy and literature, which flew in

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[4] See: Ismet Ovčina, *Bosna i Bošnjaci u hrvatskoj politici (1878.-1914.)* (Sarajevo: DES 2004)

the face of the Bosniak multi-centurial tradition of writing and literary creation in Oriental-Islamic languages, primarily Ottoman Turkish, and then Arabic and Persian (similarly to Latin in the early Croatian literature). Under such circumstances, less than half a year after the Austro-Hungarian occupation of Bosnia, in the above-mentioned *Bosansko-hercegovačke novine*, the first literary text of a Bosniak was published in the Bosnian language, and the Western scrip, in the Austro-Hungarian Bosnia-Herzegovina; the poem *Pjesna* [*A Poem*] (1878) by Hadji Hasan. The text clearly indicates the role of Croatian literature and culture in Bosniak literary practice of the time. Starting with its Croatized title, Hadji Hasan's *Pjesna* is a part of the new literary and cultural situation in Bosniak literature of the period. Its language is completely European, deprived of Orientalisms and other characteristics of prior Bosniak linguistic practice, which clearly stands in opposition, with its visibly Croatized linguistic expression and a verse characteristic of the contemporary South Slavic romantic poetry, which is also the style in which the poem was composed.[5] It is particularly noteworthy that, in the poem, there is 'a greeting from Slavs' to the Austrian military, its commanders, and General Filipović, that is to the new, occupational forces, which clearly indicates that the first Bosniak poem in the Bosnian language and the Western script in the Austro-Hungarian Bosnia-Herzegovina represents the idea of renewing Slavic affiliation in the Bosniak-Muslim populace, approximating the previous ideas of the Illyrian Movement and the Croatian National Renewal, even suggesting an inclination to the Croatian national idea.

It is true, however, that Bosniaks had already begun to approach modern Europe in the literary and cultural sense in the last years of Ottoman government in Bosnia, particularly after the introduction of printing in the Bosnian Wilayah in 1866, when the official Wilayah journal *Bosna* [*Bosnia*] also started to be printed, and when, in the first issue of this journal, the poem *Pozdrav* [*Greeting*] was published by the author, signed precisely with the pro-European label "Mr. Hadji Mehmed-Emin-Efendija."[6] Unlike the multi-centurial literary practice of Bosniaks in the Oriental-Islamic languages, and within Arabic-Alhamiado literacy, this poem is generally the first Bosniak literary text printed in the Bosnian language and Western script, which was, in this case, Vuk Karadžić's Cyrillic script (two years before it was officially adopted in Serbia in 1868), while in the case of Hadji

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[5] See: Muhsin Rizvić, *Bosansko-muslimanska književnost u doba preporoda (1887-1918)* (Sarajevo: Mešihat Islamske zajednice BiH; El-Kalem; Gazi Husrevbegova biblioteka 1990)

[6] See: Kodrić, "Preporod prije preporoda? (Pjesma *Pozdrav* 'gospodina hodže Mehmed-Emin-Efendije' i počeci novije bošnjačke književnosti)," 45-80.

Hasan's poem *Pjesna* it is the Latin script with an underlined Croatized language expression. Therefore, although it was initiated in the poem *Pozdrav* by "Mr. Hadji Mehmed-Emin-Efendija" over a decade ago, the modern Bosniak literature is starting to develop in full capacity only after the poem *Pjesna* by Hadji Hasan, as the obvious example of the 'textual colonialization' of Bosnia. And this may indicate a fully justified thesis that the beginnings of modern Bosniak literature are colonial in a way, and that, in these processes, the role of some kind of 'colonial mediator' was assigned to Croatian literature and culture, especially in the moment of development that, following the postcolonial ideas of Frantz Fanon, might be referred to as the *adoptive historical-developmental phase*, considering the underlined adoption of the other, foreign, colonial literary and cultural pattern.[7]

However, like the so-called Croatian course, this predominantly colonial, adoptive phase in the development of the modern Bosniak literature would not last long, and in the meantime, there emerged the first indications of a postcolonial development of modern Bosniak literary practice, that is its subsequent–*adaptive historical-developmental phase.* During this period, Bosniak literature and culture did not adopt other, foreign, colonial, literary and cultural patterns, but they accepted them selectively, adapting them according to their own literary and cultural matrix, even entering into polemics with the colonial literary and cultural norm, and in this case also the Croatian one. This was the case with the first great Bosniak pro-European literary and cultural reformer in the Austro-Hungarian period–Mehmed-beg Kapetanović Ljubušak, who, in his brochures *Što misle muhamedanci u Bosni* [*What do Mohammedans in Bosnia Think*] (1886) and *Budućnost ili napredak muhamedovaca u Bosni i Hercegovini* [*Future or Progress of Mohammedans in Bosnia-Herzegovina*] (1893), the first publications of that kind in Bosniaks, commenced a dialogue with the conservative elements among his compatriots, but also with the stereotypes about them in the wider Austro-Hungarian context, primarily in Croatian literature and culture. It is interesting that, in these texts, Ljubušak polemically indicates what would be defined today as a typical Eurocentric and Orientalist view of Bosnia and its populace, especially of the Muslims in Bosnia, which was previously especially characteristic for the Croatian romantic travelogue. However, despite this, Ljubušak continued to advocate for the acceptance of a series of required elements of the Western-European culture among Bosniaks, which still

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[7] See: Sanjin Kodrić, *Književnost sjećanja: Kulturalno pamćenje i reprezentacija prošlosti u novijoj bošnjačkoj književnosti* (Sarajevo: Slavistički komitet, 2012)

considered neighboring Croatian culture as the closest European cultural pattern, and the most relevant model in this sense.[8]

On these, and similar, grounds, the first pro-European generation of authors of the modern Bosniak literature were established, setting the grounds for the literature of the National Renewal period, as the late 19th and the early 20th centuries, to which Bosniak literature is most frequently referred.[9] However, in the meantime, with the development of the independent Principality of Serbia, and the Serbian national idea in general, as well as equivalent national projects on the Croatian side, these obvious ideological projects will occur in Bosnia, starting the process of the so-called 'nationalization of Muslims', that is the process of affiliation of Bosnian Muslims to either the Croatian or the Serbian national side.[10] In these processes, the Croatian national line will be closer to Bosnian Muslims, due, among other reasons, to the radical great national Serbian ideology of the time. Together with the political ideas of Ante Starčević, which were appealing to many Bosniak intellectuals of the period – this is the main reason why the most significant representatives of Bosniak literature of the time were closer to the Croatian side – such as Safvet-beg Bašagić, a poet, and drama writer, a translator from Oriental-Islamic languages, an essayist, and the first Bosniak literary historian, or reputable prose writers and novelists Osman Nuri Hadžić and Edhem Mulabdić, as well as a number of other, less relevant authors. They printed their works in Zagreb, mostly as publications of the Matica hrvatska [*Matrix Croatica*], which also published the first Bosniak novel *Zeleno busenje* [*Green Sods*] (1898) by Edhem Mulabdić, while Osman Nuri Hadžić from Mostar will publish, together with his fellow citizen Ivan Miličević, the first Bosnian-Herzegovinian novel *Bez nade* [*Hopeless*] (1895), directly founded on Starčević's ideas of Bosnian Muslims as the 'Croatian flowers' and racially purest section of the Croatian people. Despite the existence of the journal *Bošnjak* [*Bosniak*] (1891), this process was ongoing right up until the advent of the Bosniak-Muslim journal *Behar* (1900), in which the Bosniak idea was finally profiled, often in terms of the direct critical dialogue with both Croatian and Serbian national ideas, and their relationship to Bosnian Muslims. During all that time, Bosniak-Muslim authors found their own identity, primarily by aiming and striving to connect the traditions of the

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[8] See: Kodrić, *Književnost sjećanja*.

[9] See: Rizvić, *Bosansko-muslimanska književnost u doba preporoda (1887-1918)*.

[10] See e.g., Alija Isaković, (ed.), *O 'nacionaliziranju' Muslimana: 101 godina afirmiranja i negiranja nacionalnog identiteta Muslimana* (Zagreb: Globus, 1990), or: Muhamed Hadžijahić, *Od tradicije do identiteta: Geneza nacionalnog pitanja bosanskih Muslimana* (Sarajevo: Svjetlost, 1974)

Muslim Orient and the European West in both themselves and in their community, as well as in the literature and culture itself, even when, in the state of confusion caused by the 'new era', they affiliated with some other national side, or, almost simultaneously, celebrated their Muslim and Bosniak identity in concert with their Croatian or Serbian ideology. It is a wider identity ideal that may faithfully be testified to by the romantic appraisal of the national language in the poem *Čarobna kćeri!* [*Magical Daughter!*] by Safvet-beg Bašagić, in which the poet for the language, which in this case he identifies as Croatian, among other values, indicates that it:

Može da goji	[Can nourish
Može da spoji	Can connect
Istok i zapad, pjesmu i um.[11]	East and West, poem and mind.]

As in the early case of Mehmed-beg Kapetanović Ljubušak, it is obviously a characteristic adaptive phase in the post-colonial development of the modern Bosniak literature, as it starts its National Renewal, or at the moment when Bosniak literature simultaneously adopts, but also modifies to a certain extent, the foreign, colonial pattern. However, in the same period of the late 19th and the early 20th centuries, modern Bosniak literature also entered its *adept historical-developmental phase*, which Franz Fanon called 'the phase of mastering', that is, the phase of liberation from the colonial norm and its literary and cultural patterns, as well as the phase of a more comprehensive awareness of Bosniaks considering their own literary and cultural identity.[12]

This already occurs in the poetry of Musa Ćazim Ćatić, one of the most significant Bosniak poets, who, after a brief romantic phase in Bašagić's style, joined Antun Gustav Matoš's so-called 'modernist' literary circle in Zagreb, where he would become more familiar with the European modernism of the time, although Ćatić already had some knowledge of modern European literature, as filtered through the Turkish literature of the period, which had become Europeanized primarily through its direct ties and relations to French literature. Like Bašagić, Ćatić was also a connoisseur of Oriental-Islamic languages and the Oriental-Islamic literary tradition that had included the older Bosniak literature for centuries, but it was Ćatić who realized completely what Bašagić aimed at – to finally

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[11] Safvet-beg Bašagić, *Trofanda iz hercegovačke dubrave (1890-1894)* (Zagreb: Author, 1896), 80.
[12] See: Kodrić, *Književnost sjećanja*.

connect "the East and the West, poem and mind", in his words, or his own literary and cultural heritage and challenges of European modernism. In this context, in a series of other examples, one that is particularly interesting is Ćatić's auto-poetic, programmatic poem *Ja sam vjerni rob ljepote* [*I Am a Faithful Slave to Beauty*] (1909), which Ćatić, by no accident, published in Zagreb, the place where he had conducted his previous modern studies, in the journal *Mlada Hrvatska* [*Young Croatia*], that is, in an exceptionally modern Croatian literary journal of the time, as well as one which was supported by Matoš himself. Already, by its title, the poem clearly alludes to the European modernist lartpourlartism, as well as to the very essence of the aesthetic utopia of European modernism, but even in the title, and more in the poem itself, there is also something else present, the special 'surplus' that Ćatić could never learn from the great Matoš, nor even from the Turkish modernists– the holy teaching of Islamic mysticism, that is, the Sufi experience of life and the world that permeates the core of the Oriental-Islamic poetry tradition, including the older Bosniak poetry in the Oriental-Islamic languages. Simply, as a "faithful slave to the Beauty", the poet, or the lyrical subject, is a follower of the lartpourlart aesthetic ideal, but also of the Divine Absolute, Who, according to the Islamic mysticism, or Sufism, is precisely Beauty itself, because "God is Beautiful and He loves beauty", says the Islamic Prophet. Ćatić published this poem, which is, simultaneously completely modern and European, and entirely Islamic and mystical in a Sufi way, in the main Croatian literary and cultural journal, in order to masterfully legitimate himself as a characteristic, true, modern poet, but also, above all, a unique one. It is therefore no surprise that some elements of Ćatić's poetry will be found later on in the poetry of Matoš, previously the teacher of Ćatić, as is presented in, for example, the famous Matoš poem *Srodnost* [*Similarity*] (1910), published three years after the related, yet equally important, Ćatić poem *Zambak* [*Lily*] (1907).

At least up to a certain point, it may be suggested by this Bosnian-Herzegovinian / Bosniak and Croatian literary and cultural parallel from the late 19th and the early 20th centuries, that these are very complex literary and cultural relations which are principally not visible enough, but sometimes almost unknown in both the traditional framework of Bosnian studies and the traditional framework of Croatian studies, despite being undoubtedly important to both of them, as well as to wider South Slavic literary and cultural studies. Inappropriate insights into these issues are not only the result of specific interests of individual disciplines, but are, on the contrary, a direct consequence of epistemological limitations of the traditional humanities. Therefore, these and other similar issues, clearly indicate the

advantages of new and different perspectives which are characteristic for the contemporary paradigm of digital humanities.

(Un)known pages: *Behar* and the Bosniak and Croatian literary and cultural encounters

The undoubted advantages and new possibilities that may be introduced in the studies of cultural heritage through digital humanities are testified to in an exemplary manner by the case of the journal *Behar*, specifically important in the context of the (in)visibility of the Bosniak and Croatian cultural ties and relations in the late 19th and the early 20th centuries. The position and the role of *Behar* in the literary and cultural life of Bosnia-Herzegovina, especially among Bosniaks, has already been demonstrated by the Bosnian-Herzegovinian literary historiography, and the most important contribution in this sense was provided by Muhsin Rizvić, a highly respectable historian of Bosniak and Bosnian-Herzegovinian literature.[13] By exploring the occurrence and history of *Behar*, Rizvić, in the nature of matters, touched on the issue of non-Bosniak authors in this journal, indicating in his way the problem of different intercultural and interliterary ties and relations. However, only digital humanities may raise this type of research, and presentation of the research results in a higher, and, in today's epistemological moment, more adequate, level.

The journal *Behar* was a Bosniak "journal for education and entertainment" and was published fortnightly from May 1 1900 to February 1 1911 in Sarajevo. The editors of *Behar* were mostly highly reputable personalities of the time among Bosniaks; (chronologically ordered) Safvet-beg Bašagić, Edhem Mulabdić, Mehmed Džemaludin Čaušević and Šemsi-beg Salihbegović. After this, the editor of *Behar* was a non-Bosniak–Ljudevit Dvorniković, and, finally, Hamid Šahinović edited the final three numbers of *Behar*, in its final, eleventh year. As the first Bosniak journal specialized in literary and cultural content within the literature and culture of Bosniaks, *Behar* opens the era of a strong and diverse literary genre, reflecting aims and points of view in the overall literary, cultural, educational, political, and national, life of Bosniaks during the Austro-Hungarian administration in Bosnia-Herzegovina, until the occurrence of the later Bosniak journals *Gajret* [*Volunteering*] (1907-1914; 1921-1941) and *Biser* [*Pearl*] (1912-1913, 1913-1914 and 1918) which had a somewhat different program and ideological orientation. The founders of *Behar* were

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[13] Muhsin Rizvić, *Behar: književnohistorijska monografija* (Sarajevo: Svjetlost 2000)

Safvet-beg Bašagić, Edhem Mulabdić, and Osman Nuri Hadžić, who were, at the time, affirmed writers who actively contributed to contemporary Bosnian-Herzegovinian, but also Croatian, journals. Contrary to the previous tradition, within their literary work in different genres, and also by their general social action among the Bosniak populace, they insisted on accepting Western enlightenment by Bosniaks, including literary creation in the national, Bosnian language, and Western literacy, that is the literacy in Latin and Cyrillic script, unlike the previous dominant writing in Turkish or another Oriental-Islamic language. They aimed to break the literary and cultural lethargy among Bosniaks in the new, post-Ottoman situation in Bosnia at the end of the 19th and the beginning of the 20th centuries, even though the propaganda of culture and education in the national language and Western script was a very delicate undertaking at the time. The founders of *Behar*, with the conception and the content of the journal, gradually disputed the previously widely-held belief among Bosniaks that the national Bosnian language and the Western, Latin or Cyrillic script, may not be used in the Muslim tradition or in the framework of Islamic belief. And this is exactly where *Behar* played the key role in the constitution and early profiling of modern Bosniak culture, and especially the modern Bosniak literature, whose authors in the first decades after the Austro-Hungarian occupation of Bosnia considered *Behar*, in particular, as their key journal.

With the primary literary and cultural role, *Behar* had also an important role in forming the wider social life of Bosniaks, in accordance with the requirements of the new, post-Ottoman period in Bosnia, including the formation of the national identity of Bosniaks, similar to the role of some other journals among Croats in Croatia.[14] Moreover, one of the initial ideas of the founders of *Behar* was precisely the nurturing of the Bosniak collective identity, with emphasis on its specificity in reference to other communities in Bosnia, the more so because the national identities of the latter communities were significantly formed outside of Bosnia-Herzegovina, that is primarily in Croatia and Serbia. However, this pro-Bosniak orientation was not the only one of its type in *Behar*. From the journal's inception, pro-Croatian ideas, which would in time become more and more expressed in accordance with the profoundly strong processes of the so-called 'nationalization of Muslims', to the Croatian national side, were expressed in the journal. Based on this, the pro-Croatian orientation in *Behar* became entirely dominant in its time, particularly during the period when *Behar* was edited by Ljudevit Dvorniković (1861-1933), a Croatian

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[14] See e.g., Marina Protrka, *Stvaranje književne nacije: Oblikovanje kanona u hrvatskoj književnoj periodici 19. stoljeća* (Zagreb: Filozofski fakultet Sveučilišta u Zagrebu 2008)

philosopher and pedagogist, in the period starting from the ninth (1908-1909) and tenth volumes of the journal (1909-1910). And this is exactly what gives the Bosniak and Croatian relations an entirely new dimension, in general, and particularly in literature and culture.

In the concrete case of *Behar*, the domination of pro-Croatian orientation leads to a quality transformation of the previous program and the direction of this journal, which then turned from a Bosniak to a practically purely Croatian journal; that is, more precisely, the journal of Bosnian Muslims who nationally identified themselves no longer as Bosniaks, but as Croats. This was reflected by the nature of the journal's contributors: *Behar* would have ceased to exist as a journal with primarily Bosniak contributors, paving the way for increasing representation of Catholic-Croatian culture, by both Croats from Bosnia-Herzegovina and Croats from Croatia, which is the case with Dvorniković himself, who was born in Zagreb, and arrived in Sarajevo in 1900. In addition to the general social and cultural situation in Bosnia-Herzegovina in the late 19th and the early 20th centuries, these occurrences are definitely instigated by the termination of the journal *Nada* [*Hope*] (1895-1903) as the most significant Croatian journal in Bosnia-Herzegovina,[15] causing a number of Bosnian-Herzegovinian Croatian authors back in 1903 to lose domestic literary publication, and, after a certain suspension of their participation in Bosnian-Herzegovinian journals, transferred themselves directly to *Behar*, edited by Ljudevit Dvorniković. Simultaneously, on the other side, among Bosniaks, an opposite process occurred, that is, the process of Bosniak authors abandoning *Behar*, finding no room for their work or for their own literary and cultural expression in the new program, or primarily in the new national conception of the journal. Due to this, a number of Bosniak authors affiliated themselves primarily to the newly founded journal, *Gajret*, and later on to the journal *Biser.* In the conditions of intense 'nationalization of Muslims' to the Croatian or Serbian national sides, *Gajret*, in the meantime, took a more pro-Serbian orientation, while the reformed, pro-Croatian *Behar* was one of the results of the national and political discrepancy of Bosniaks between the Croatian and the Serbian national ideas at the time, particularly prior to the Austro-Hungarian annexation of Bosnia-Herzegovina in 1908. Due to these changes, *Behar*, along with its own national orientation, lost its previously emphasized religious Muslim program component, since the 'previous' *Behar*, which was more religious than worldly, had turned into a "popular entertainment and educational journal." As a consequence of this change, an even greater dissipation of Bosniak authors in *Behar* occurred, as well as the influx of a

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[15] See: Boris Ćorić, *Nada: 1895-1903* (Sarajevo: Svjetlost 1971)

greater number of Croatian authors, especially from Bosnia-Herzegovina, who, due to the lack of their own publication, lavished *Behar* with their work. The relationship between Bosniak and non-Bosniak authors in this period may be presented by a ratio of their published contributions according to Table 15-1:[16]

Table 15-1. Ratio of published contributions by Bosniak and non-Bosniak authors

	IX volume (1908-1909)	
	Bosniak contributors	Other contributors
Number of contributions	43	102 + 102 ("Listak")
Ratio	1	5
	X volume (1900-1910)	
	Bosniak contributors	Other contributors
Number of contributions	75	74 + 57 ("Listak")
Ratio	1	2

As is evident from the table above, the number of works by Bosniak writers in the ninth volume of *Behar* fell far behind the number of works by other contributors, while in the tenth volume, which is visibly needier than the previous one, the ratio improves a bit. However, the number of Bosniak literary authors decreased in reference to previous years. It is obvious, therefore, that the pro-Croatian affiliation represents a through twist in the program orientation of the journal, which "no longer has the reason or requirement to make program compromises between literature and education, between the worldly and religious enlightenment in order to acquire the audience of a unique ethnic and mental structure and serve its general cultural elevation",[17] as had been the case before. Unlike the previous period, *Behar,* then, became almost a completely Western journal, while the relationship with the Muslim tradition is kept primarily in terms of insisting on uniting the Muslim Orient and the European West, which, in a specific manner, characterized *Behar*, particularly in this developmental phase, that is, at the time of Ljudevit Dvorniković as the journal's editor. *Behar*, therefore, became increasingly similar to journals from Croatia, although it still kept certain Bosnian-Herzegovinian specificity, especially in reference to the Muslim component. However, it did reach the status of the most reputable of Croatian journals, and thus, despite the active support and participation of Croatian writers from Bosnia-Herzegovina and Croatia,

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[16] Rizvić, *Behar*, 384.

[17] Rizvić, *Behar*, 386.

it remained the journal of the literary average; provincial and distant from the contemporary courses of modern Croatian literature. This also refers to the Croatian contributors of *Behar*, who were mostly previous contributors of *Nada*, and who did not rise above the average of modern Croatian literature. The only exception is Silvije Strahimir Kranjčević, a truly great poet, whose previous contribution to *Nada* was also of crucial significance.

As previously mentioned, the position and the role of *Behar* in the literary and cultural life of Bosnia-Herzegovina, particularly of Bosniaks, has already been clarified in a specific way by the Bosnian-Herzegovinian literary historiography, but it is the digital humanities that provide the opportunity for a more integral understanding of the occurrence of this journal, and especially for understanding its role in the intercultural and interliterary ties and relations between Bosniaks and Croats in the late 19th and the early 20th centuries. From this perspective, it is possible to completely recognize the contribution of the Croatian authors to Bosniak journals such as *Behar*, which means it is possible to understand more profoundly the complex correlations and ties between the two cultures; Bosniak and Croatian. In this context, it is interesting to follow the phenomena of the genre focus of Croatian contributors in *Behar*, which are only some of the issues that were left undiscovered by previous researchers of the journal.

In the area of poetry, *Behar* contained the works of: Silvije Strahimir Kranjčević, Nikola Ostojić, Tugomir Alaupović, Mihovil Nikolić, Mirko Jurkić, Rikard Katalinić Jeretov, Stjepan Ilijić, Josip Milaković, Ivan K. Ostojić, Adolf Makale, Rudolf Fr. Mađer, Anka Topić, A. Jukić, K. Häussler, Andro Frank and poet contributors under the pseudonyms: Uvelak (Ljuboje Dlustuš), Dobroslava (Josipa Gazivoda Radošević), Miljenko Ljubinac, Narcis, Budački and Arijadna. It is interesting to examine the literary value of these authors, as well as the dynamics of their contributions in *Behar*, and their occurrence in the volumes of the journal and the number of contributions that they published. Namely, a conclusion may be drawn that, except for Kranjčević and several other potential exceptions, such as Tugomir Alaupović, Mirko Jurkić, Rikard Katalinić Jeretov, or Josip Milaković, it was mostly completely marginal authors who collaborated in *Behar*, that is, the authors who, in the past, or currently, have had no relevant role in the history of Croatian literature.[18] Out of a total of 21 Croatian poet-authors, only authors of superficial significance occur in multiple volumes of *Behar*. The author Josipa Gazivoda Radošević (Dobroslava), entirely unknown today, appears in the journal with a total of 40 poetry works from

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[18] See e.g., Dunja Fališevac et al., eds., *Leksikon hrvatskih pisaca* (Zagreb: Školska knjiga 2000)

1908 to 1910, while Kranjčević, as the only great Croatian poet who cooperated in *Behar*, published only two poetry works in it, in 1908 and 1909, that is, one in the beginning and one in the middle of the editorial period of Ljudevit Dvorniković, and who later gave up publishing in *Behar*. These details are precisely presented in the bibliographic sequence *author–volume / year–number of authorial poetry contributions* (Table 15-2).

Table 15-2. Bibliographic sequence *author–volume/year–number of authorial poetry contributions*

Author	Volume / year	Number of authorial poetry contributions
Alaupović, Tugomir	1908/1909	4
Arijadna	1909/1910	1
Budački	1908/1909, 1909/1910	8
Dlustuš, Ljuboje (Uvelak)	1908/1909, 1909/1910	5
Frank, Andro	1909/1910	4
Gazivoda Radošević, Josipa (Dobroslava)	1908/1909, 1909/1910	40
Häussler, K.	1909/1910	1
Ilijić, Stj. (Stjepan)	1908/1909, 1909/1910	6
Jukić, A.	1909/1910	1
Jurkić, M. (Mirko)	1908/1909, 1909/1910	3
Katalinić-Jeretov, Rikard	1908/1909, 1909/1910	4
Kranjčević, Silvije St. (Str.)	1908/1909	2
Ljubinac, Miljenko	1909/1910	1
Mađer, Rudolf Fr. (Rudolf Franjin)	1908/1909, 1909/1910	3
Makale, Adolf	1908/1909	1
Milaković, J. (Josip)	1908/1909, 1909/1910	9
Narcis (N.)	1908/1909, 1909/1910	2
Nikolić, Mihovil	1908/1909	1
Ostojić, I. K. (Ivan K.)	1908/1909, 1909/1910	5
Ostojić, Nikola	1908/1909	1
Topić, Anka (Topićeva Anka)	1908/1909, 1909/1910	6

In the area of prose fiction, among the Croatian authors in *Behar,* the following writers occur: A. Kuzmanović, Ivan Klarić, Rikard Katalinić Jeretov, Andro-Frank Petranović, Rudolf Franjin Mađer, Ivan Trtanj, Vladimir Odić, Mijo Radošević, Ferid Maglajlić (Ferdo Vrbančić), Ivan Pavličević, Budački, Milan Bešlić, Marija Dragutin, Anka Topićeva and F. Zippra. Among the 16 *Behar* prose writers, there are, therefore, no

significant Croatian writers, which indicates that *Behar* was not considered attractive to Croatian prose writers, other than beginners, that is, authors who were probably trying to build their writers' identities in the pages of *Behar* and thus recommend themselves to other, more significant, Croatian journals. Generally speaking, among the present Croatian authors there are very few who published multiple prose works, and the very dynamics of their publishing in *Behar* is presented in the bibliographic sequence *author–volume/year–number of authorial prosaic contributions* (Table 15-3).

Table 15-3. Bibliographic sequence *author–volume/year–number of authorial prosaic contributions*

Author	Volume / year	Number of authorial prosaic contributions
Bešlić, Milan	1908/1909	1
Budački	1908/1909, 1909/1910	5
Dragutin, Marija	1909/1910	1
Frank-Petranović, Andro	1908/1909	1
Katalinić Jeretov, Rikard	1908/1909, 1909/1910	4
Klarić, Ivan	1908/1909, 1909/1910	3
Kuzmanović, A.	1908/1909	1
Mađer, Rudolf Fr. (Franjin)	1908/1909	2
Odić, Vladimir	1908/1909	1
Pavličević, Iv. (Ivan)	1908/1909	1
Radošević, Mijo	1908/1909	1
Topićeva, Anka	1909/1910	2
Trtanj, Iv. (Ivan)	1908/1909	1
Vrbančić, Ferdo (Ferid Maglajlić)	1908/1909, 1909/1910	3
Zippra, F.	1909/1910	2

The appearance of original authorial texts by Croatian authors in *Behar* under Ljudevit Dvorniković as editor could contribute significantly to neither the development of the modern Bosniak, nor Bosnian-Herzegovinian, literature in general during this period, since at the time, Bosniak and Bosnian-Herzegovinian literature already had a line-up of excellent story-tellers, such as Osman Nuri Hadžić, or Edhem Mulabdić, the authors of the first Bosnian-Herzegovinian, or the first Bosniak novels. In the same manner, on the other, Croatian, side, *Behar* also failed to produce more significant Croatian authors in Bosnia-Herzegovina, particularly in the wider context of Croatian literature, regardless of the pro-Croatian course

of Ljudevit Dvorniković as the journal's editor. Also, it is interesting that among Croatian authors who collaborated in the journal, there are no writers of dramatic texts.

But, unlike the original literary practice, the publication of translations in *Behar* during the period of Ljudevit Dvorniković as the journal's editor is somewhat more interesting. Instead of previous translations from Oriental-Islamic languages and translations by Bosniak translators, under Dvorniković, notable translations from the Western languages, as well as translators who were Croats, were published. *Behar* began to publish both poetry and prose translations from German, French, Italian, Russian and Czech, although there were no translations of drama texts. As translators in the area of poetry, among Croatian authors in *Behar,* the following are included: Kranjčević for German, Nikola Ostojić and Stjepan Ilijić for Italian and Josip Milaković for Czech, while in the area of prose fiction in translations from French, Ela Kranjčević, wife of Silvije Strahimir Kranjčević, collaborates, Pavao M. Rakoš under the Muslim pseudonym Selim Rakošev translated from Russian, Pavao M. Rakoš and Milan Prelog, who would later become a famous historian, also translated from Czech. It is interesting that the number of poetry works significantly decreased in comparison to prose fiction, and that they only appeared from 1908 to 1909, although it is important that these are translations from languages that have not been regularly translated in the Bosniak context, as is the case with translations from Italian or Czech, as presented in the bibliographic sequence *author/title (poetry)–translator–volume/year* (Table 15-4):

Table 15-4. Bibliographic sequence *author/title (poetry)–translator–volume/year*

Author / Title (poetry)	Translator	Volume / year
Campanini, Naborre: *Pšenica* [*Wheat*]	Ostojić, Nikola	1908/1909
Carducci: *Ruit hora*	Ilijić, Stj.	1908/1909
D'Anunzio, G: *Prezreni* [*Abject*]	Ostojić, Nik	1908/1909
Heine, H.: *Iz "Knjige pjesama" od H. Heinea* [*From "The Book of Poems" by H. Heine*]	Kranjčević, Silvije Sr.	1908/1909
Hvezdoslav (Pavel Orszag): *Da očajaš mi?* [*Do you Despair?*]	Milaković, Josip	1908/1909
Vrhlicky, Jaroslav: *Pjesme* [*Poems*]	Milaković, Josip	1908/1909

In comparison to poetry, the data indicate a significantly greater number of translated prose texts, although there are fewer languages from which the texts were translated, since the present ones are only Russian and Czech, and the translators are also only two–Pavao M. Rakoš (Selim Rakošev) and Milan Prelog. There is a more than obvious dominance of translations from Russian, which were done by Pavao M. Rakoš, who introduced the readers of *Behar* to Russian classics such as Leonid Andreyev, Anton Pavlovich Chekhov and Maxim Gorky, which was very important for the Bosniak audience who, generally speaking, had had no opportunity to read Russian literature in their own journals before. Pavao M. Rakoš also translated the works of Adam Mickiewicz, but it is not certain whether those are translations from the Polish original, or from Russian translation, although the latter seems more probable. But, regardless of which language Rakoš translated Mickiewicz from, the appearance of this author in a journal such as *Behar* is still significant. Details about the translations of prose texts from foreign languages are presented in the bibliographic sequence *author/title (prose)–translator–volume/year* (Table 15-5).

Table 15-5. Bibliographic sequence *author/title (prose)–translator–volume/year*

Author / Title (prose)	Translator	Volume / year
Anonim: *Žywila. (Litavska priča)* [*Žywila. (A Lithuanian Story)*]	Rakošev, Selim (Pavao M. Rakoš)	1909/1910
Andrejev, Leonid: *Div* [*A Giant*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Andrejev, Leonid: *Laž* [*A Lie*]	Rakošev, Selim (Pavao M. Rakoš)	1909/1910
Čehov, A. P.: *Istražni sudac* [*Investigating Judge*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Čirikov, Ev.: *Nagrade* [*Rewards*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Dorošević, V. D.: *Savjest. Kitajska bajka* [*Conscience. A Kitaj Fairytale*]	Rakošev, Selim (Pavao M. Rakoš)	1909/1910
Gorki, Maksim: *Mudrac* [*Wiseman*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Harry, Myriam: *Pod Galaadskim balzamima* [*Under the Balm Trees of Galaad*]	Kranjčević, Ela	1908/1909
Korolenko, Vladimir: *Šuma šušti* [*The Forrest Rustles*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909

Kosmak, Vaclav: *Dimnjačari i lopovi* [*Chimney Sweepers and Thieves*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Mendès, Catulle: *Lèa. Crtica* [*Lèa. A Sketch Story*]	Kranjčević, Ela	1908/1909
Mickiewicz, Adam: *Ko je bolji* [*Who Is Better*]	Rakoš, Pavao M.	1908/1909
Niemojevski: *Na željezničkom stroju* [*On the Rail Machine*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Rehakova, Ana: *Nađeni zapisnik* [*The Discovered Record*]	Rakoš, Pavao M.	1909/1910
Telešov, R.: *Poštena riječ* [*Honest Word*]	Rakošev, Selim (Pavao M. Rakoš)	1909/1910
Vika, Karel: *Ljubavna legenda* [*Love Legend*]	Prelog, Milan	1908/1909
Vrhlicky, Jar: *Šareno crjepovlje* [*Colorful Roof Tiles*]	Rakošev, Selim (Pavao M. Rakoš)	1908/1909
Vrhlicky, Jar: *Abisaga*	Rakošev, Selim (Pavao M. Rakoš)	1909/1910

Of course, these are not the only issues of the Bosniak and Croatian cultural ties and relations realized in the pages of *Behar*. For example, it would also be possible to consider the poetical characteristics of the texts that are published in *Behar*, or which have been translated by Croatian authors. Besides, intense folkloristic, or oral literature-gathering activity was performed in *Behar*, and there is also a significant number of literary criticism texts and other various contributions published by Croatian authors in the journal. In all these, and other similar cases, it would be important to explore the occurrence of the Bosniak and Croatian ties and relations realized in *Behar*, and in all these cases, an approach from the perspective of the digital humanities might offer significantly greater opportunities for research, especially opportunities for presenting the relevant material.

Digital Rebirth: Bosniak and Croatian Cultural Ties and Relations and Humanities Today

Today, the journal *Behar* is kept in almost all important Bosnian-Herzegovinian heritage institutions–in Gazi Husrev-beg's Library in Sarajevo, where it is preserved wholly, and also in other institutions, such as the National and University Library of Bosnia-Herzegovina, the Bosniak Institute–Foundation of Adil Zulfikarpašić, the Sarajevo Library, and the

Library of the Bosniak Cultural Community of "Preporod", where it is preserved partially. However, it is certain that, in smaller numbers of copies, *Behar* is preserved elsewhere in Bosnia-Herzegovina and abroad, especially in Croatia, Serbia, and Montenegro, as well as in private bibliophilic collections. Learning from the experience of the devastation of the National and University Library of Bosnia-Herzegovina in August 1992, during the aggression on Bosnia-Herzegovina (1992-1995), but also of the devastation of the Oriental Institute in Sarajevo and the valuable Library of the Oriental Institute in May 1992, Gazi Husrev-beg's Library first microfilmed, and later, through hybrid conversion, digitized the entirety of its manuscript codes, including older journals, starting with the Ottoman, through Austro-Hungarian period, all the way to the present.[19]

This corpus within the Digital Library of the Gazi Husrev-beg's Library in Sarajevo, includes, of course, all numbers, or all volumes of *Behar*, that, obviously, in their digitized copies, contribute to the visibility of the Bosnian-Herzegovinian heritage material in general, but also to the visibility of the Bosniak and Croatian cultural and literary relations and ties in this particular case. The same applies to the projects of digitization of old Bosnian-Herzegovinian journals realized within other heritage institutions in Bosnia-Herzegovina, although the digitization projects of Gazi-Husrev beg's Library in Sarajevo are certainly the most representative projects of this type in the Bosnian-Herzegovinian context. Still, all this is not enough to wholly represent the Bosnian-Herzegovinian heritage material,[20] and it especially is not enough when it comes to studying and representing a very important and complex issue such as Bosniak and Croatian cultural ties and relations, especially in the late 19th and the early 20th centuries. Therefore, among other projects, it would be necessary to establish common collections of digitized material from both countries, from Bosnia-Herzegovina and from Croatia; collections that would include journals, but even more than that. With journals, it would be of particular relevance to digitize the printed editions of Bosniak authors published in Croatia, especially the publications of the *Matica hrvatska*, and vice versa, that is, editions of Croatian authors published in Bosnia-Herzegovina. Above all, it is imperative that the manuscript material preserved in the heritage institutions in both countries be digitized, the more so because it is most often material that is completely unavailable to the wider public, but also to the researchers themselves. Simultaneously, these projects might represent an incentive or basis for other similar projects of a broader character,

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[19] See: Gazi Husrev-begova biblioteka. "Digitalna biblioteka." Accessed April 25 2018. http://digital.ghb.ba/ghb/login.xhtml.
[20] See: Kodrić, *Digitalne informacijske usluge u baštinskim ustanovama*.

including macro-projects spanning the entire South Slavic region, and especially the region of the common Bosnian, Croatian, Montenegrin, and Serbian languages. Only then can the range of Bosniak and Croatian relations and ties be evaluated entirely, which would also open insight into new, more complex relations. In this way, new, different, comparative, and cultural South Slavic studies could be established, without unconquered borders between individual literary-historical disciplines, but also without strict borders with other, related, non-literary disciplines and research perspectives, including the information sciences, in the manner appropriate for epistemological opportunities of the digital era in which we live. However, it is difficult to realize these ideas without the benefits that are offered today by digital humanities.

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TOPIC VI:

RESEARCH AND COMMUNICATION OF CULTURAL HERITAGE

CHAPTER 16

POSSIBILITIES FOR TOURISM EVALUATION OF DIGITALIZED CULTURAL HERITAGE IN THE ZADAR COUNTY

ĐANI BUNJA AND SLAVO GRGIĆ

Abstract

This chapter deals with the issue of tourism valorisation of digitized cultural heritage, and the possibilities for the use of written heritage for tourism purposes as part of tourist attractions in tourist destinations. In the introductory part, it is emphasized that tourism is a complex phenomenon, with particular emphasis on the concepts of tourist motivation and elements of tourism product as predispositions for tourism development. Furthermore, this chapter presents a discussion of heritage in terms of determining its parts as tourist attractions, cultural tourism, and the related tourism market segment, and also provides an overview of relevant scientific papers dealing with the digitization of cultural heritage for tourism purposes. In its final part, this chapter deals with the possibilities for tourist valorisation of written heritage, which is also suggested for the qualitative improvement of the Zadar County tourism as a tourist destination.

Keywords: tourism valorization, cultural heritage, cultural tourism, digitization.

Introduction

The concept of tourism is very difficult to determine unambiguously. In fact, it is probably true that there are almost as many different definitions of the phenomenon in question as there are of those who deal with tourism, which significantly marks contemporary society. Tourism enters into the lives of each of us, regardless of whether we agree with it or not. Nowadays,

there are few who do not have at least some contact with tourism. Moreover, it is difficult to find someone who has never been a tourist. Tourism rightly intrigues and attracts the attention of each of us, and is especially important to those who live off tourism. Modern society is very much defined by relationships which are generated by tourism. The understanding of the nature of tourism, the motivation factors that encourage the decisions made by individuals or groups while travelling, the relations between environment and local communities pressured by tourist activities, the roles of tourism activities in national economy, and the problems caused by the development of tourism, have become central issues nowadays. Tourism involves tourists, on the one hand, and on the other, the domiciled population in tourist destinations. While the former allocate a specific amount of discrete income to tourist spending, the latter gain benefit from tourist traffic at the same time. A prerequisite for tourist traffic is the existence of infrastructure based on the attractions of the destination, and the upgrading of the same is the tourism industry. Undoubtedly, the system of values today includes vocation, travel, and experiences related to visiting new social and ecological environments or, in general, all the values deriving from tourism.

Understanding the nature of tourism can be approached from the aspect of system theory. The purpose of this approach is to rationalize and simplify the complex reality of tourism into a certain number of structures and components. Accordingly, it follows that tourism is an integrated system, consisting of several elements in mutual interaction. Tourism is an interdisciplinary phenomenon approached from different perspectives. In fact, tourism cannot only be viewed from deterministic aspects, but the evaluation of issues and factors related to tourism should be interdisciplinary.

One of the fundamental questions of our contemporary society is seeking answers to the question of why tourists travel. The answer to the previous question should be sought in relation to the motivation of the individual for travelling, and his ability to do so effectively. Motivation makes people act in a certain way, and, in fact, are an inseparable part of every individual. What motivates people to engage in deferent forms of behaviour, including involvement in tourist flows, and how is it possible to explain it? Is it part of the freedom of choice domain for individuals, or maybe there are certain factors that initiate one's desire to travel, and eventually effect on choosing a potential tourist destination. In this context, certain tourist destinations (and the related tourism industry) can get the benefit of it if they manage to understand what affects a holiday maker's choice among various possibilities (Table 16-1).

Table 16-1. Decision making process related to holidays[1]

Decision making process		
Individual needs	**Perception**	**Possibilities and limitations**
Perception related to satisfaction	destination image promotional activities distance traffic alternatives	family status life standard available time choice of product
Destination choice	previous experiences childhood memories recommendations risk management common perceptions	existential conditions content preferences age social circumstances personal system of values

The previous explication should not be perceived as a universal formula based on which tourists make decisions about a journey, because motivation is, above all, an individual variable. The explanation of the process of decision making is not straightforward. Certain theories suggest that people react to stimulant on predetermined manner that it is possible to predict. This is the so-called behavioural approach. In contrast, the so-called cognitive approach claims that individuals can be irrational and unpredictable and that human behaviour is largely subjectively defined.[2]

The sheer enormity of tourism relations in the economic system of a country, or a region that claims to be a tourist destination, results in adjusting the overall economic structure to the requirements of the tourist community. Although it is relatively difficult to determine the relevant structure of tourism, or its sector as an independent economic entity, yet it is defined by the structure of tourist consumption. Between the tourist offer and the tourist demand, direct contact is established. The necessity of direct contact is crucially conditioned by tourism.

The result of the production process in tourism is a tourism product. Under 'the tourism product', we mean the so-called integrated tourism product. It is a set of so-called partial products, regarding certain products of individual manufacturers, because tourist consumption is not only about accommodation and food, but it also includes a number of other ancillary services. A part of the tourist product is not the result of human labour, or if it is, it was not originally intended for tourist consumption. A tourism product can be understood in terms of tourist territories, tourist regions, or

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[1] Adapted from: S. J. Page, P. Brunt, G. Busby, and J. Connell, *Tourism: a modern synthesis* (London: Thomson Learning 2001), 60.
[2] Ibid., 60-61.

places, or in terms of a specific tourism economic entity.[3] In view of their origin, the elements of a tourism product can be classified as following:

- natural elements,
- elements resulting from previous human labour, not originally intended for tourism,
- elements resulting from human labour, intended for tourism purposes,
- organized events.[4]

The elements of the tourism product, in functional terms, can be divided into basic and characterization elements. Basic elements are fundamental in the tourism product, and it is exactly what attracts tourists. They are not the result of human labour, or if they are, it is just in part. Cultural heritage is also a basic element. Characterization elements are an upgrade of fundamental elements. The availability of high-quality characterizing elements of a tourism product of a particular area has an important impact on the tourist consumption.

Tourist Valorisation of Heritage

For the tourist product, a certain degree of attractiveness is necessary. Tourist attractions include a wide range of contents resulting from human work and natural processes. Tourist attractions attract a wide range of tourists, but also smaller fragments of the tourist market, namely tourists of specific interest. For the majority of tourists, destination attractions are the reason they visit. Attractions are often used as marketing tools, or as icons to promote image destinations in certain outgoing tourist markets. The definition of a tourist attraction by the Scottish Tourist Board (STB) implies free public access to entertainment, education, sports, culture, and more; openness without pre-registration; and the ability to attract tourists and daily visitors, as well as the domicile population.[5] Attractions are usually a locality, or very small geographic areas based on one basic content. Destinations are larger areas that include numerous individual attractions along with various other attractions sought by tourists (Table 16-2).

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[3] Đani Bunja, *Organizacija poslovanja u ugostiteljstvu i turizmu* (Zagreb: Školska knjiga 2001), 36.

[4] John Swarbrooke, *The Development and Management of Visitor Attractions* (Oxford: Butterworth-Heinemann 1995), 7.

[5] Page, et al., *Tourism: a modern synthesis*, 118.

Table 16-2. Parts of heritage as a tourist attraction[6]

Type of attractions	Heritage
natural attractions	national parks, nature parks, nature reserves, natural rarities, wildlife, geological phenomena, caves, caves, cliffs, waterfalls, landscape scenery, etc.
science-based attractions	museums of science, technological parks, etc.
production attractions	agriculture attraction, farms, vineyards, fishing, mining, melioration systems, water supply systems, museum of crafts, watchtowers, windmills, blacksmiths, watermarks and goldsmiths, glassware, mass production of pottery, porcelain and things like, wineries, breweries, distilleries, museums, etc.
traffic attractions	transport museums, historic roads, canals, preserved railroad tracks, harbours, etc.
cultural attractions	prehistoric and historical sites, traditional architecture, local museums, ethnographic museums, etc.
attractions associated with historical personalities	localities associated with writers, painters, sculptors, architects, army leaders, politicians, athletes, and others.
art-based attractions	theatres, galleries, art museums, street performances, etc.
horticulture	gardens, arboretums, avenues, etc.
theme parks	historical parks, etc.
festivals and events	historical games, traditional festivals, celebrations, 'festivals', etc.
sports	various sports and sporting events
architectural attractions	castles, palaces, buildings of various purposes, etc.
religious attractions	cathedrals, churches, monasteries, chapels, etc.
military attractions	fortresses, battlefields, military museums and others
city centres	the historic city centre
rural	rural amenities, traditional rural architecture, etc
seaside resorts and seaside	seaside resorts with historical core, coastal and marine areas
county	counties and other historic sites that can be identified

The availability of tourism resources and their potential, and the degree of their attractiveness, are prerequisites for the development of tourism in a given area. For the purpose of exploiting tourist attractions of a certain area

[6] Adapted from: Richard Prentice, *Tourism and Heritage Attractions* (London: Routledge 1993), 39-40.

it is necessary to valorise them effectively. This is primarily the task of the destination management, the tourism industry management, local government and self-government, etc. The valorisation of the basic elements of the tourism product should have a starting point in the analysis of natural, historical, and cultural heritage, and also the offers in terms of the attraction of the destination. Considering that one of the basic characteristics of the tourism market is that supply significantly exceeds demand, it is necessary to identify and perform a competitive analysis. Only then can it be possible to determine the goals of market policy and their operationalisation.

Tourists choose a particular destination because of its specificity compared to others. Attractions must be integrated into the tourist product of the destination, and its visitor appeal depends, among other things, on the interpretation of the content that it has. Interpretation implies the introduction of tourist attractions in a way that will capture their attention and provide them with new knowledge. Interpretation allows tourists to realise their experiences related to attractions.[7] In the conditions of a market saturated by supply, the economic categories under which the market policy is implemented are replaced by communication categories. In fact, tourist valorisation of the resources and potentials is not possible without the parallel building of positive identity and image. When a certain circle of potential consumers, i.e. the market, is familiar with the destination product, then the comparative advantage over the competition is achieved. The quality level and the ratio of achieved satisfaction in relation to consumers' expectations is becoming a crucial market challenge, and therefore it is realistic to expect that tourists will increasingly focus on quality when choosing their destinations.

Natural, historical, and cultural heritage, are tourist attractions, and a fundamental prerequisite for the development of tourism in a given area. Considering that tourism can make a significant contribution to economic development, but that it has negative besides positive effects as well, strategic management of tourism development needs to be approached. In this context, the valorisation of natural, historical and cultural heritage is the first step in strategic thinking about tourism management, followed by the interpretation of such heritage, i.e. the valid presentation of attractions on the market. This provides the basis for defining the destination market policy, taking into account the economic and communicational aspects of

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[7] Weber, Sanda, and Vesna Mikačić. *Osnove turizma* (Zagreb: Školska knjiga 1995), 90.

the operationalisation of the goals, permanently paying attention to the necessity of planning, and analysing the quality of the supply structure.

Cultural Tourism and Cultural Tourists

Although cultural tourism can be defined in different ways, it is necessary to outline its conceptual and technical definition.[8] Conceptually, cultural tourism is defined as the travel of persons outside the place of permanent residence with the aim of gathering new information and experiences that meet their cultural needs. The technical definition differs from country to country, and most often includes visits to cultural and historical sites, museums and galleries, music-scene events and festivals, churches and monasteries, and thematic routes and paths, as well as creative or interactive workshops. This definition of culture also encompasses not only the so-called 'tangible culture', but also an intangible culture, such as customs and traditions. At the same time, by definition, for tourists to be regarded as cultural, they must, at least partially, be motivated by the desire to participate in cultural activities.

Although estimates indicate that around 40% of all international vacation trips contain a cultural component, this product is highly heterogeneous, and includes a variety of activities, so it is difficult to talk about a unique product or unique profile of a cultural tourist.[9] It is generally considered that cultural tourism encompasses travel predominantly motivated by the knowledge of cultural heritage, history, art and 'culture of life and work'. Cultural tourists are desirable for a variety of reasons, especially because they are more gifted, more educated, and stimulate cultural activities in the destination. The tourism sector of Croatia, through the development of cultural tourism, can increase the quality of the entire tourist product, through enrichment and revitalization, thus attracting tourists with better payouts, extending the season, geographically expanding demand, and stimulating consumption, as well as improving the destination's image. At the same time, culture can make a significant contribution to the development of the uniqueness of destinations, and thus also, in the further promotional activities of the tourism sector. By actively involving the tourist system, the cultural sector can also yield direct and indirect benefits: new sources of income, greater numbers of visitors, and

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[8] Greg Richards, *Introduction: Global trend in cultural tourism, Cultural tourism: global and local perspectives* (New York: Haworth Hospitality Press 2006).
[9] *Tourism and culture synergies*. Madrid: World Tourism Organization 2018.

alternative sources of funding.[10] The growing demand for cultural tourism is conditioned by socio-demographic changes as well as changes in lifestyles, higher educational levels, and an increase in the number of elderly people, who have a strong interest in culture, less interest in sun and sea vacations, seek the pursuit of alternative activities and have less free time which they want to use in a good way.[11] This trend will continue in the future, and so will the growth in demand for cultural tourism.

When it comes to culture-motivated travel, today we can talk about the following three segments:

1. Trips motivated by getting to know cultural heritage related to the past, and encompassing cultural events, attractions, and traditional culture;
2. Trips motivated by getting to know cultural heritage related to the staging of historical events, or to modern popular culture;
3. Trips motivated by creative cultural activities related to preserved past ones, such as Glagolitic script learning, traditional skills, contemporary practice of life culture, or contemporary art production. [12]

Furthermore, there is a growing demand for cultural experiences, and a cultural tourism product integrated with religion, gastronomy, and literary tourism. So today, more and more is spoken about a shift towards 'creativity', that is, a shift from less tangible tourism to more 'involved' forms of 'consumption'. Tourists differ in view of the role that culture has in their motivation to travel, which can be classified as follows:

- Tourists *motivated* by culture: this group makes up 5% to 15% of tourists, and about 5% of local residents. They are attracted by elite, cultural, events and tourist packages, and they like to be treated as special guests.
- Tourists *inspired* by culture: this is the largest group of about 30% of tourists and about 15% of local residents. They are attracted to well-known cultural sites, attractions or events (such as popular exhibitions). They are sensitive to price and look for value for money. They are only partially motivated by culture and are mostly attracted by well-publicized popular performances, concerts, or exhibitions, and have little more than superficial curiosity for local culture. Anyway, they will visit cultural attractions provided they have the time, and if they are easily accessible and offer value for money.

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[10] *Strategija razvoja kulturnog turizma: "Od turizma i kulture do kulturnog turizma"* (Zagreb: Institut za turizam, 2003), 3-5.
[11] *The impact of culture on tourism* (Paris: OECD 2009).
[12] *Strategija razvoja kulturnog turizma*, 10-11.

- Tourists *attracted* by culture: these make up about 20% of tourism and 20% of the local market. This group does not plan their visit to cultural attractions, but will visit them if offered during their stay. For this group, local cultural resources may be attractive, provided they have at some time received information about performances, exhibitions or cultural and historical attractions of the site. Marketing in the destination, timely information, availability of attractions, and, where necessary, ease of booking tickets, are key elements for attracting this group of tourists.[13]

Therefore, it should be borne in mind that the majority of so-called cultural tourists are not specifically motivated by culture, that is, the share of those whose cultural tourism activities are the main motive of travel is relatively small. In Croatia, according to market surveys,[14] a relatively small share of tourists, only 7.5%, cite cultural attractions as one of the reasons for their arrival, but almost half of them participate in some cultural activities. It can, therefore, be concluded that we already have a significant proportion of foreign tourists attracted by culture, i.e., those who do not plan to visit cultural attractions, but visit them if they are informed in a timely way during their stay. By developing cultural tourism products we can also attract culturally motivated tourists with a specific interest in a particular aspect of our culture, e.g., history, archaeology, religion, gastronomy, and the like.

Digitalization of Cultural Heritage

Numerous authors have been involved in cultural heritage issues within various scientific disciplines. While tourism researchers have often dealt with the tourism valorisation of cultural heritage as their subject of research, there are a small number of works dealing with digitized cultural heritage in the context of tourism. Namely, from the research of databases, and, in particular, Current Contents (CC), the Web of Science (WoS), SCOPUS, and the Croatian Scientific Bibliography (CROSBI) database, it can be seen that a relatively small number of scientific papers address the issue of tourism valorisation of digitized cultural heritage.

The Current Contents database shows that in two papers, the terms 'digitization', 'cultural heritage' and 'tourism' (*digitalization and cultural heritage and tourism*) were used. The search included all the papers from 1998 to 2018. The Web of Science database results in six papers using the relevant terms. The search included all works from 1955 to 2018. By

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[13] Ibid., 5-6.
[14] Institut za turizam, Zagreb, 1997, 2002, 2008.

searching the SCOPUS database, it was found that seven papers used the relevant terms. The search included all works from the period 1960 to 2018. The Croatian Scientific Bibliography (CROSBI) database results in four papers using digitization, cultural heritage, and tourism (*digitalization and cultural heritage and tourism*). The search included all works from 1995 to 2018 (Table 16-2).

Table 16-3. Works on the topic of tourism valorisation of digitized cultural heritage

Title	Authors	Reached conclusion
Scanning Application for the Study, Preservation and Exploitation of Heritage Tourism: A case study of a set of underground cellars: Declared Spanish good of cultural interest (BIC)[15]	Blaya, F., Nuere, S., Islan, M. & Reyes-Tellez, F.	New digital technologies can be used to inventory and catalogue cultural heritage with a view to promoting cultural tourism. For this purpose, the authors propose the use of the so-called 'reverse engineering' technique.
Sustainable Digitalization of Cultural Heritage Report on Initiatives and Projects in Brandenburg, Germany[16]	Preuss, U.	Digitalization of cultural heritage requires an interdisciplinary approach and cooperation between the various stakeholders, as well as reliable IT infrastructure
Virtualization of Digitalized Cultural Heritage and Use Case Scenario Modelling for Sustainability Promotion of National Identity[17]	Cirulis, A., Paolis, L.T.D. & Tutberidze, M.	The digitized and 3D visualization of cultural heritage, through highly complex techniques based on reverse engineering, can be used to create a national tourist identity.

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[15] Fernando Blaya Haro, Silvia Nuere Menendez-Pidal, Manuel Enrique Islan Marcos, and Francisco Reyes-Tellez, "Scanning application for the study, preservation and exploitation of heritage tourism: A case study of a set of underground cellars: Declared Spanish good of cultural interest (BIC)," *Arte, Individuo y Sociedad,* 29,1 (2017): 163-176.

[16] Ulf Preuss, "Sustainable digitalization of cultural heritage-Report on initiatives and projects in Brandenburg, Germany," *Sustainability*, 8(9), 891 (2016).

[17] Arnis Cirulis, Lucio Tommaso De Paolis, and Mikheil Tutberidze, "Virtualization of Digitalized Cultural Heritage and Use Case Scenario Modeling for Sustainability Promotion of National Identity", *Procedia Computer Science*, 77 (2015): 199-206.

Digital Cultural Heritage and its Applications: Case Studies of Digital Mogao Grottos and Chi Lin Nunnery Reconstruction[18]	Li, D., Du, Z., Zhu, Y. & Wang, T.	The concept of digital cultural heritage has an applicative purpose in tourism's protection, preservation, and valorisation.
Copyright and Data Authenticity in the Digital Preservation of Heritage: The Case of OAPI[19]	Nwabneze, C.J.	Digitization provides a sustainable way of preserving cultural heritage and its entire availability, which can have significant implications for the development of tourism
Experiences About Fusioning 3D Digitalization Techniques for Cultural Heritage Documentation in Cáceres Wall[20]	Ortiz, P. & Matas, M.	The authors suggest the use of digitized 3D records and the development of so-called virtual tourism, and not just for the conservation and restoration purposes of cultural heritage.
Toward an Arts and Creative Sector[21]	Cherbo, J.M., Vogel, H.L. & Wyszomirski, M.J.	The authors are analysing the issue of copyright and intellectual property protection in the context of digitization for the purpose of developing so-called knowledge-based economies.

Of the Croatian authors, it is necessary to specifically mention the paper on the Center for Conservation of Intangible Cultural Heritage in Slavonia, Baranja and Srijem,[22] in which the authors deal with the issue of preserving intangible cultural heritage, and the role that the public sector body involved

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[18] D Li, Du Zhiqiang, Zhu Yixuan, and Tingsong Wang, "Digital cultural heritage and its applications: Case studies of Digital Mogao Grottos and Chi Lin Nunnery reconstruction," in: *Proceedings of SPIE–The International Society for Optical Engineering, 2010,* 78411T

[19] C.J. Nwabneze, "Copyright and data authenticity in the digital preservation of heritage: The case of OAPI," *International Journal of Intangible Heritage*, 12 (2017): 93-110.

[20] P. Ortiz, and M. Matas, "Experiences about fusioning 3D digitalization techniques for cultural heritage documentation," in: *Cáceres Wall, ISPRS Archives*, 38 (5W1), 2009, code 133800.

[21] Joni Maya Cherbo, Harold L. Vogel, and Margaret Jane Wyszomirski, "Toward an arts and creative sector," in: *Understanding the Arts and Creative Sector in the United States,* ed. by Joni Maya Cherbo, Ruth Ann Stewart, Margaret Jane Wyszomirski (Rutgers: University Press, 2008), 9-27.

[22] Emina Berbić Kolar, Maja Vretenar Cobovic, and Vjekoslav Galzina, "Center for conservation of the intangible cultural heritage in Slavonia, Baranya and Syrmia," in: *4th International Scientific Symposium on Economy of Eastern Croatia - Vision and Growth,* 4, (2015): 144-152.

in this activity may have in the development of tourism of a particular destination area.

Therefore, in tourism-related literature, there are only a small number of papers dealing with the issue of tourism valorisation of digitised cultural heritage. In fact, based on the assessment of previous research it can be argued that relevant works either do not deal with, or only partially deal with, the issue of the digitalization of literary heritage for the purpose of tourism valorisation.

Possibilities of Written Heritage for Tourist Valorisation

In terms of tourism valorisation, it is necessary to determine the elements of historical and cultural heritage, and to isolate historical events and personalities associated with certain periods. The way in which tourism attractions are valued depends on the factors or criteria on the basis of which the competitiveness of tourism products is being built. The path of defining tourism product policy should be a set of motifs which encourage potential tourists to spend money. However, regardless of the motives of tourists, in no case is it futile to explore the past and culture of a particular tourist destination, and as such, to use it for the promotion of tourism, and indirectly, economic and social relations, i.e., the quality of life of the domicile population.

Tourists choose a particular destination because of its specificity compared to others. Attractions must be integrated into the tourist product of the destination, and its number of visitors depends, among other things, on their interpretation of the content it possesses. Interpretation implies the introduction of tourist attractions in a way that will capture their attention and provide them with new knowledge. Interpretation allows tourists to experience the attractions.

In this context, the question arises as to whether the digitized written heritage can be valued for tourism purposes, and can it take the form of tourist attractions? Texts written in Glagolitic scripts and other old scripts and languages, which are the subject of digitalization, are usually extremely valuable in historical documents, such as registers, testaments, or other notary and judicial decisions. However, in order to valorise such heritage, we need some kind of metadata, that is, we must be able to digitize results to make them available for research, so that potential tourists can access such content and understand it. This, of course, is not possible if we give them access to digitized registers; for example, parish birth registers written in Glagolitic script. Therefore, digital literacy is a prerequisite for their tourism valorisation, while in the next phase, digitized data need to be

created, which will, to a certain extent, be accessible and available for research to the interested public.

Thus, the realized digitized written heritage can have multiple applicative purposes. In our opinion, it is not only valuable in the field of science, but can also be used to attract people from our own countries who are interested in exploring their identity. In tourism literature, we encounter the term 'identity tourism', which, among other things, describes tourist motifs of people who travel in order to discover their roots in a cultural or ethnic sense, but also includes those exploring the country of their family origin. According to official data of the relevant state bodies, our emigrant community has more than three million people. Many of them could be encouraged, if such information is available, to search for information about their ancestors, family heritage, and the historical and cultural heritage of the region they originate from in general.

Conclusion

Zadar County considers tourism to be the fundamental sector of economic development. However, given the available resources and potential on the market, it has not offered a sufficiently competitive product, nor is it recognizable as a destination. The previous constellation is further determined by the inadequate valorisation of the historical and cultural heritage, as well as the inadequate valorisation of the potential of the inland part of the county.

Historical and cultural heritage is a tourist attraction, and falls into the range of basic preconditions for the development of tourism in a given area. In this context, valorisation of historical and cultural heritage is essential to the strategic thinking of tourism management, followed by its interpretation, i.e. the valid presentation of attractions on the market. This can also help digitize some of the cultural heritage that a particular destination area can bring to the tourist market. For this purpose, based on the results of previous research on the issue of digitization of cultural heritage in tourism, regarding the qualitative improvement of the area of Zadar County as a tourist destination, tourism valorisation of digitized cultural heritage is suggested.

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CHAPTER 17

TOURIST VALORISATION OF FIDDLES AND FIDDLE SINGING

ALEKSANDRA KRAJINOVIĆ, DARIO VIŠTICA AND JURICA BOSNA

Abstract

This chapter investigates tourism valorisation of fiddles and fiddle singing; traditional instruments and a form of singing with a rich cultural background. A questionnaire was sent to the e-mail addresses of tourist boards of the cities and municipalities of Zadar County, in order to find out the current involvement of fiddles and fiddle singing in the tourist offer of the County, as well as the potential forms and ways in which the fiddle and fiddle singing could be more efficiently valorised in the future. In addition to the tourist boards and the online survey conducted, we also carried out a deeply structured interview with the fiddler Dane Jurić, in order to obtain more information about the matter. By using tourist valorisation of fiddles and fiddle singing, different types of tourist products can be created, while simultaneously contributing to the preservation of the non-material cultural heritage of Zadar County. All respondents are of the opinion that fiddles and fiddle singing are an important part of the tourist offer of Zadar County, and that a tourism key stakeholders' initiative is needed, and is expected, in order to achieve a better and more efficient tourist valorisation of fiddles and fiddle singing in the future.

Keywords: fiddles, fiddle singing, tourism valorisation, Zadar County

Introduction

In the last few years, a trend towards fragmentation of tourism offerings and cultural tourism has become increasingly evident. This creates a need for

constant improvement of the quality and variety of existing offers in order to keep pace with competing tourist destinations. The expectations of modern tourists are becoming more specific, and, accordingly, a high level of awareness of tourism workers and all other stakeholders in tourism is required regarding the importance of a timely profiling of their offers, while taking into account sources of motivation for modern tourists detected from different aspects of science and practice. Also, the process of seeking and recognizing the potential of different destinations, being one of the key factors for success, necessitates the inclusion of the local population, which can serve as an excellent source of ideas, inspiration, and support, in the further development of the identified potential. However, the human factor is unpredictable, and is considered to be the most critical aspect, especially if it is about establishing a tourism offer based on autochthonous products, due to the local population being one of the indigenous factors/segments of a certain type of offer. One of the issues that today's destinations can encounter is a possibly excessive dispersion of the offer, resulting in the loss of the autochthonous quality of certain forms of cultural offerings which are based on the true foundations of tradition, and can be lost due to the excessive commercialization and lack of focus. Therefore, a high level of awareness about the increase of fragmentation of the tourist offer needs to be present, together with the increasingly precise desires of tourists, and the progressively stronger competition. It can be concluded that these trends are defined by constant changes which need to be considered as an immutable variable if we want to survive and to continue to successfully develop within the market.

The Role and Importance of Non-material Cultural Heritage in Tourism

The initial purpose of cultural tourism was the expansion of the basic offer. Today, cultural tourism is the carrier of the tourism offer, depending on the type of attraction of a particular location which might include: tradition and folklore, music manifestations, cultural manifestations, handicrafts, archaeological sites, festivals, entertainment programs, cultural monuments, oenological offerings, national dishes, folk games and creativity, agricultural works and tools, art colonies, exhibitions, etc.[1] Traditional

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[1] Ivana Paula Gortan-Carlin, and Ivona Orlić, "Ponuda i potražnja autentičnosti u glazbeno-turističkom doživljaju Istre: Ceste glazbeno-tradicijskih manifestacija," *Problemi sjevernog Jadrana*, 13 (2014): 120, accessed November 18 2017, http://bib.irb.hr/prikazi-rad?rad=751680

culture is constantly transforming, and is, as a global trend, increasingly aligned with the needs of the tourism sector which consequently represents or even increases the economic profit of the domestic population. For example, most cultural events are organized during the summer months.[2] The local community is the basis of, or an obstacle to, the development of any type of cultural tourism product, and for this reason the quality of life of the local community is emphasized as being a very sensitive issue, because if the quality of life of the local community is negatively influenced, the development as a whole takes on a negative context, while the increasing dissatisfaction can even result in the failure of the product itself.[3] The use of cultural resources today represents a big challenge because it is no longer sufficient to develop a tourist offer only, based on the specificity of a culture, but instead, using that same basis, it is necessary to develop a differentiated tourist product that will contain a certain element of creativity.[4] It is not always necessary to invent new forms of tourist offer in order to increase the interest of tourists, but sometimes, it is enough to offer the existing tourist product in an unusual way, time, or place.[5] Consumers are becoming more and more experienced, that is, they have been everywhere and they have seen everything, and therefore it becomes increasingly hard to satisfy them. With every new experience or travel of the tourist it becomes harder and harder to achieve a 'Wow!' effect.[6]

According to research conducted on the example of Istria, most domestic and foreign tourists who visit music events during their holidays want to learn how to play, dance, or sing, or, in other words, they want to learn, experience, and hear something which is indigenous to the destination they are currently in.[7] Creative tourism is a step forward in relation to cultural tourism because it creates and delivers greater value to tourists who thus have the opportunity to truly experience the authenticity of the destination.

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[2] Gortan-Carlin and Orlić, "Ponuda i potražnja autentičnosti u glazbeno-turističkom doživljaju Istre," 122.

[3] Elena Rudan, "Razvojne perspektive kreativnoga turizma Hrvatske", *Ekonomska misao i praksa* 2 (2012): 727, accessed December 23 2017, https://hrcak.srce.hr/94173.

[4] Aleksandra Krajnovic, and Ivana Paula Gortan-Carlin, "Possibilities of music heritage tourist valorization: an example of Istria. "*Tourism and hospitality management*, 13,2 (2007): 471, accessed December 10 2017, https://hrcak.srce.hr/181127

[5] Andrzej Stasiak, "Tourist product in experience economy," *Tourism*, 23.1 (2013): 31, accessed November 28 2017. doi: https://doi.org/10.2478/tour-2013-0003.

[6] Andrzej Stasiak, "Tourist product in experience economy," 33.

[7] Gortan-Carlin, and Orlić, "Ponuda i potražnja autentičnosti u glazbeno-turističkom doživljaju Istre," 133.

The top quality of creative tourism stems from the ability to convey specific knowledge and skills that represent an invaluable mental souvenir to modern tourists which can be useful in everyday life, and which can provide an experience that changes their ways of thinking about the surrounding world and their own place within it, or, in other words, contributes to their identity.[8] Creative tourism includes a wide variety of activities ranging from music, drama and visual arts, gastronomy, language, sports, etc. Such activities have certain advantages in relation to traditional cultural tourism, because of their rarity and creativity which can easily create value. Creative tourism can develop faster than other forms of tourism because destinations can, relatively quickly, create such a product, and because creativity is a process, it is more sustainable than physical resources. Furthermore, an additional advantage is the mobility of creativity, using as examples artistic works or performances that can be performed anywhere regardless of infrastructure. Further on, the implementation of creative tourism is considerably cheaper, because it is based on transferring local experience and skills to consumers in a suitable environment that, in most cases, does not require a special infrastructure, although if it exists that can also be used.[9]

It is also very important to emphasize the contributions of the development of creative tourism, which are, according to Rudan:

- decreasing of seasonality since creative tourism is not necessarily related to the summer period and the seaside, and it can therefore be developed in other parts of Croatia;
- strengthening of small entrepreneurship and private initiatives, since creative offerings do not require great financial projects, but they do rely on the creativity of the inhabitants of a destination;
- creating a competitive tourist product based on creative programs and actions;
- increased consumption due to the knowledge about diversity and value of the destination (autochthonous food, souvenirs, etc.);
- the offer might include other geographical areas, traditional crafts or cultural events that are not yet available.[10]

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[8] Aleksandra Krajnovic, and Ivana Paula Gortan-Carlin, "Possibilities of music heritage tourist valorization ," 472.

[9] Greg Richards, "From Cultural Tourism to Creative Tourism: European Perspective," *Turizam* 50.3, (2002): 232, accessed October 11 2017, https://www.researchgate.net/publication/254817127_From_Cultural_Tourism_to_Creative_Tourism_European_Perspectives

[10] Elena Rudan, "Razvojne perspektive kreativnoga turizma Hrvatske," 724.

The main features of the economics of experience are the combining of experience with the process of consumption, while including the use of modern technology, and the active participation of consumers, as well as the individualization and personalization of created experiences.[11] It is necessary to conceptualize and study experience as three distinct dimensions, namely: the conative dimension - to find out which traits are driving and directing the behaviour of individuals; the affective dimension - to see what determines the way of experiencing, mood, emotion, or temperament; and the cognitive dimension, which determines the direction and mode of action that would be appropriate to a certain profile of the tourist. In other words, every individual event should be perceived holistically.[12] Furthermore, tourism infrastructure needs to be transformed into a unique tourist attraction in order to significantly enhance the emotions and excitement of consumers, so the elements of experience and emotions need to be included in the existing offer, and it is necessary to provide a unique and sometimes extreme experience, as well as to constantly search for new tourist locations as well as new forms of tourism.[13] People are basically happy to travel or go to places of specific events to engage in activities that are different from the usual ones, and thus acquire new and unusual experiences available only to the traveller or the event visitor.[14] Literature emphasizes the complexity of tourism products, and any other form of cultural tourism, stating the main components of such products as follows: physical appearance, the visual attractiveness of the attraction entrance, available information on websites, the quality of promotional materials, the ambience, the hospitality of employees, the presentation of cultural resources as well as their interpretation, audio-visual materials, additional attractions, etc.[15] It is therefore important to assure an effective marketing management of cultural attractions, and, in each arrangement, to combine different interest areas as well as providing various services,

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[11] Marciszewska, Barbara, "Produkt turystyczny a ekonomia doświadczeń," *CH Beck, Warszawa* (2010), quoted in Andrzej Stasiak, "Tourist product in experience economy," *Tourism*, 23.1 (2013): 1, accessed November 28 2017. doi: https://doi.org/10.2478/tour-2013-0003.

[12] Roger C. Mannell, and Seppo E. Iso-Ahola, "Psychological nature of leisure and tourism experience*," Annals of Tourism Research*, 14.3 (1987): 323, accessed December 12 2017, doi:10.1016/0160-7383(87)90105-8.

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[15] Victor TC Middleton, et al. *Marketing in travel and tourism* (Routledge, 2009), 163.

amenities and attractions, while taking into account the authenticity of the destination.[16]

As a future perspective, a more highly-designed and highly targeted experience will be required, which needs to be based on a better knowledge of planning experiences in all their dimensions in accordance with the type of event, the setup, and the management system.[17] The authenticity of the offer makes it possible to create quality content, while the main attractions are the uniqueness and diversity of the destination, making the 'winners', those whose tourism products offer a 'better story' or, in other words, those who have the most successfully embedded an 'emotional component' within their product, offering tourists an unprecedented and unique experience. Valuable resources that can serve as the basis for the concept of 'storytelling' in rural areas are authenticity, traditional and cultural values, and historical heritage. An adequate valorisation of these values relating to the needs of tourism can provide the necessary added value. It is therefore necessary to utilize the existing elements and to create, as much as possible, new cultural and entertainment events as an opportunity for 'storytelling'.[18]

Fiddler–Singer of Stories

Traditional music, as part of cultural tourism, may be exclusive, and therefore appealing to tourists only if it is characteristic for a destination.[19] Traditional music and musical instruments transfer the deepest cultural, spiritual and aesthetic values of a civilization to new generations. It is not required to have a formal education in order to understand music; it is

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[16] Peter Keller, "Tourism and Culture: Managing Change," AIEST, St.(2000), quoted in: Vesna Vrtiprah, "Kulturni resursi kao činitelj turističke ponude u 21. stoljeću," *Ekonomska misao i praksa*, 2 (2006): 287, accessed November 15 2017. https://hrcak.srce.hr/10683.

[17] Donald Getz, and Stephen J. Page, "Progress and prospects for event tourism research," *Tourism Management*, 52 (2016): 620, accessed November 3 2017, doi: https://doi.org/10.1016/j.tourman.2015.03.007.

[18] Aleksandra Krajnović et al., "Cultural Manifestation Based on Rural Tourism Development: Istrian Example," In: *International Conference of the School of Economics and Business in Sarajevo "Traditional Challenges of EU Integration and Globalisation,"* (2008): 2 accessed December 20 2017,
http://bib.irb.hr/datoteka/404633.Krajnovic_Gortan_Rajko.pdf.

[19] Danijela Angelina Jelinčić, "Turizam vs. Identitet," *Etnološka istraživanja*, 11, (2006): 167, quoted in: Ivana Paula Gortan-Carlin, and Ivona Orlić, "Ponuda i potražnja autentičnosti u glazbeno-turističkom doživljaju Istre: Ceste glazbeno-tradicijskih manifestacija," *Problemi sjevernog Jadrana*, 13 (2014): 122, accessed November 18 2017, http://bib.irb.hr/prikazi-rad?rad=751680.

available to all strata of society and it is most often created during the most important moments of life.[20] Fiddles and fiddle singing are strongly associated with epic singing in Serbia, Montenegro and the Republic of Croatia where[21] they are mostly connected to the Dinaric region.[22] The Dinaric cultural area is characterized by patriarchal education and a large family, and weak development, while tradition and rural culture is, today, largely only part of folklore, nurtured through cultural-artistic societies, sentimental singing, and nostalgic lyricism.[23]

A fiddle is a single or two-string instrument, made out of one piece of wood, specially decorated with engravings. The head of the neck of the fiddle is usually made in the shape of an eagle, a hawk, a chamois, or a horse. The bow is made out of a suitable branch of wood, which is combined with 40-60 hairs taken from the tail of a horse. The strings of the fiddle are also made from the hairs taken from a horse's tail. By straining or releasing the tension of the strings at a higher or lower level of the base, the tune is achieved. Unlike other stringed instruments, when playing, the fingers do not touch the neck of the instrument. The fiddle is tuned according to the voice abilities of the singer, and, including the empty string, it uses five basic tones. Although it has a limited number of tones, playing the fiddle is particularly complex because of the required skill to achieve a clear tone by pushing the strings sideways, which differentiates this instrument from other classic stringed instruments. The singing is recitative, dramatic, and declarative, and in unison with a melodic line, while the musical ornament and the method of singing depend on the style of the fiddle singer. The fiddle is played in a way that the fiddle singer keeps it positioned between his legs or on his lap.[24]

The fiddle singer is an oral poet, using the fiddle as an accompaniment to a recited narrative that he compiles during his performance or through improvisation.[25] The fiddle singer is also called the "Singer of Stories"

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[20] Krajnovic, and Gortan-Carlin, "Possibilities of music heritage tourist valorization," 472.

[21] A.P. Tate, "Guslar," *Encyclopaedia Britannica*, (2015), accessed March 14 2018, https://www.britannica.com/art/guslar.

[22] Jadran Jeić Baguzej, "Gusle u Žuljani," *Hrvatska revija*, 3, (2016), http://www.matica.hr/hr/492/sadrzaj-26073/.

[23] Ivana Crljenko, "Cultural-Geographic Characteristics of the Dinaric Karst Region of Croatia," *Acta Geographica Croatica*, 39.1, (2012): 30, accessed October 11 2017, https://hrcak.srce.hr/140974.

[24] Jeić Baguzej, "Gusle u Žuljani."

[25] Albert Bates Lord, *Pevač priča* (Beograd: Idea, 1990), 37, quoted in: Tarik Ćušić, "Epska formula kao instrument čuvanja orijentalizama u bosanskome jeziku," *Književni jezik*, 26,1/2 (2015): 9, accessed November 15, 2017,

according to the phrase proposed by Milman Parry, used to describe the storyteller of oral narrative forms, acknowledged even in the greatest of Homer's epics.[26] It is interesting to note that, in 1935, Parry documented a fiddle singer who sang 12,389 verses.[27] At Harvard University, according to Tate, and based on research done by Milman Parry and Albert Lord in the 1930s, there are records of fiddle singers' performances from the whole region.[28] Fiddle songs are written in a decasyllabic form, and their poetry is most often an expression of the patriarchal mentality, while their verses refer to border conflicts, robbery, marriages to girls from opposing camps, heroic abductions, cruelty to unfaithful women, etc.[29] The most common locations of adventures and heroic ventures in the Republic of Croatia are Ravni Kotari, Cetinska krajina, Senj, Lika and Krbava, while sometimes cities such as Zadar, Knin, Karlovac, Osijek, and others are also mentioned.[30] The fiddler is interesting in his creative game, where listeners can always be surprised with verses that convey news about people and times, that were establishing contexts, but were also entertaining.[31] There is no ceremonial procedure or party without the presence of a fiddler singer. They are considered as consolers of people, who, thanks to them, manage to endure all the hardships while retaining their nationality. It can be said that the fiddle has had an informative and educational role because it transmits important information and moral messages, while also expressing resistance, most often of Christians in relation to other faiths. Therefore, in those areas where the threat of Turks' invasions was greater, the fiddle playing tradition is more pronounced. It is believed that refugees from the

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www.izj.unsa.ba/files/2015-26-1-2/1-TarikCusic.pdf.

[26] Mirsad Kunić, *Usmeno pamćenje i zaborav: krajiška epika i njeni junaci* (Tešanj: Centar za kulturu i obrazovanje Tešanj, 2012), 28.

[27] Tarik Ćušić, "Epska formula kao instrument čuvanja orijentalizama u bosanskome jeziku," (2015): 9, accessed November 15,2017, www.izj.unsa.ba/files/2015-26-1-2/1-TarikCusic.pdf.

[28] A.P. Tate, "Guslar."

[29] Maja Bošković-Stulli, "Narodne pjesme iz Dalmacije - priobalje i zaleđe," *Narodna umjetnost: hrvatski časopis za etnologiju i folkloristiku*, 40.2, (2003): 12, accessed December 17 2017, https://hrcak.srce.hr/27792

[30] Ivan Mimica, "Lokalitet Otres u povijesti i hrvatskoj usmenoj poeziji," *Godišnjak Titius: godišnjak za interdisciplinarna istraživanja porječja Krke*, 1.1, (2009): 54, accessed October 25 2017, https://hrcak.srce.hr/111972.

[31] Sead Alić, "Oral Transmission and Written Word in Mediterranean Culture," in: *Mediteranski korijeni filozofije*, (2009): 375, accessed October 29 2017, http://seadalic.com/index.php/sead-alic-usmeno-i-pismeno-mediteranske-kulture.

regions under Turkish rule, while seeking refuge, spread the fiddle-playing tradition on the coast and the islands.[32]

Methodological Approach

The aim of this research is to define whether there is awareness about the importance of tourist valorisation of fiddles and fiddle playing by tourist boards or municipalities in Zadar County. Additionally, the research will point out the role and importance of tourist valorisation of fiddles and fiddle singing, with the intent to stimulate tourism communities, municipalities, and all other tourism stakeholders, to initiate the tourism valorisation of fiddles and fiddle singing.

In July 2017, a survey questionnaire was sent to the e-mail addresses of the Zadar County tourist boards in order to determine, in accordance to their response, the current utilization and potential of fiddles and fiddle singing, together with other information important for the tourist valorisation of fiddles and fiddle singing. The municipalities that do not have their own tourist board have also been sent a questionnaire asking the person in charge of the community to fill out the questionnaire. The replies to the submitted polls were collected until the beginning of November 2017. A total of 28 questionnaires were sent to the Zadar County tourist boards, and seven survey questionnaires to municipalities that do not have their own tourist boards.

A total of 13 tourist boards responded to the conducted survey questionnaire (Povljana, Tkon, Vir, Bibinje, Jasenica, Sukošan, Obrovac, Biograd na Moru, Sali, Pakoštane, Kolan, Novigrad and Benkovac), as well as two municipalities (Gračac and Galovac). The answers to the survey were collected until the beginning of November 2017.

Additionally, a deeply structured interview was conducted in mid-July 2017 with the fiddler Dane Jurić, in Skradin, resulting in additional information about the problem. The entire interview was recorded with his consent while the conversation was attended by Patrick Levačić, PhD, who did not participate in the conversation.

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[32] Jeić Baguzej, "Gusle u Žuljani."

Results

Survey Questionnaire

When asked about the importance of tourist manifestations based on local autochthonous practices, 40% of respondents answered that they are important, and 60% of respondents stated that they are very important (Table 17-1).

Table 17-1. The importance of tourist manifestations based on local autochthonous customs

Zadar County tourist boards	Responses
Povljana	Important
Tkon	Very important
Vir	Very important
Gračac	Very important
Bibinje	Very important
Jasenice	Important
Sukošan	Very important
Obrovac	Important
Biograd na Moru	Very important
Galovac	Important
Sali	Important
Pakoštane	Very important
Kolan	Important
Novigrad	Very important
Benkovac	Very important

Regarding the current utilization of the potential of fiddle playing and fiddle singing, on a grade scale ranging from 1 to 5 (1=completely unutilized, 5=completely utilized), 60% of respondents gave the score 1, 6.67% rated with grade 2, and 33.33% rated with grade 3. When asked about the general importance of tourism valorisation of fiddle playing and fiddle singers, the answers were as follows: 20% graded 1, 20% graded 2, 33.33% graded 3, 13.33% graded 4, and 13.33% gave the grade 5.

For a more efficient future tourism valorisation of fiddle playing and fiddle singing, according to the respondents, a great engagement is needed to start the initiative, and to assure the key support of experts. When asked

whether we contribute to the preservation of the intangible cultural heritage of our regions with this type of tourism valorisation, all respondents agreed that we do contribute. Also, all the respondents who answered positively were asked to score from 1 to 10 to what extent, in their opinion, we contribute. The responses were as follows: 6.67% graded 2, 33.33% graded 5, 13.33% graded 7, 26.67% graded 8 and 20% gave the grade 10. Additionally, the respondents were asked to answer whether they think this type tourism valorisation should be offered independently, or in a 'bundle' with other tourist products. All respondents opted for the 'bundle' option. Those who, in the previous question, answered that such a type of tourism valorisation should be offered in a 'bundle' with other tourist products, were supposed to mark one or more tourist products to be included in this type of offer. Table 17-2 shows the results.

Table 17-2. Contribution of the intangible cultural heritage tourist valorisation for its preservation

Tourism products	Response share
Autochthonous forms of accommodation (rural tourism)	60%
Autonomous nutrition	80%
Biking, hiking and north-walking trails	6,67%
Participation of tourists in agricultural works and works in the village	53.34%
Participation of tourists in rural household work	80%
Adrenaline tourism	0%
Sport tourism	0%
Wellness tourism	0%
Business and congress tourism	0%
Traditional dances	86.67%
Traditional skills (lace from Pag, etc.)	73.34%
Combinations with modern music	40%
Combinations with orchestral music	6.67%
Combinations with other traditional music	80%

When asked whether this kind of music should always be performed in a natural environment, or whether it was possible to perform it in coastal destinations (e.g., Zadar) or urban ones (e.g., Zagreb), 93.33% of respondents stated that this type of music can be performed anywhere outside of its natural environment, while 6.67% (one respondent) of the respondents stated that this type of music should be performed within its

natural environment. With the next question, we learned from the respondents whether they would be willing to engage in creating and performing such a type of tourist offer. 66.67% of respondents gave a positive response, and 33.33% a negative one. Furthermore, the respondents were supposed to explain how they would be involved in creating and performing this type of tourist offer, to which they gave different answers. As the most frequent response, the respondents stated that fiddle singing should be included in existing tourist manifestations. In the next question, the respondents were asked to give a grade from 1 to 5, in order to evaluate each individual type of tourist product that could be created through the exploitation of fiddle playing and singing, whereby the highest average ratings were given to the connection of fiddles and fiddle singing to other tourist products, performances in major tourist destinations in the region, and the making and selling of autochthonous souvenirs i.e. fiddles. The respondents were also asked to select which stakeholders to connect to, in order to successfully create this type of tourist offer. Each selected shareholder was to be rated from 1 to 5, with the highest average ratings assigned to cultural institutions, cultural art societies, municipalities, and cities, as well as other tourist communities in the immediate surroundings. The answers about the importance of the involvement of local population in the creation of this type of tourist products can be seen in Figure 17-1.

As part of the next question, it was necessary to evaluate each individual contribution to the tourism valorisation of fiddles and fiddle singing. The respondents were asked, once again, to provide a grade from 1 to 5, with the highest average ratings being given to the preservation of tradition, education, and inclusion, of the local population, the protection and valorisation of the identity of fiddlers, and everyone involved in this type of music, and the contribution to the development of rural tourism in the Dalmatian hinterland, as well as the strengthening of cultural, social and tourism identity of the Dalmatian hinterland.
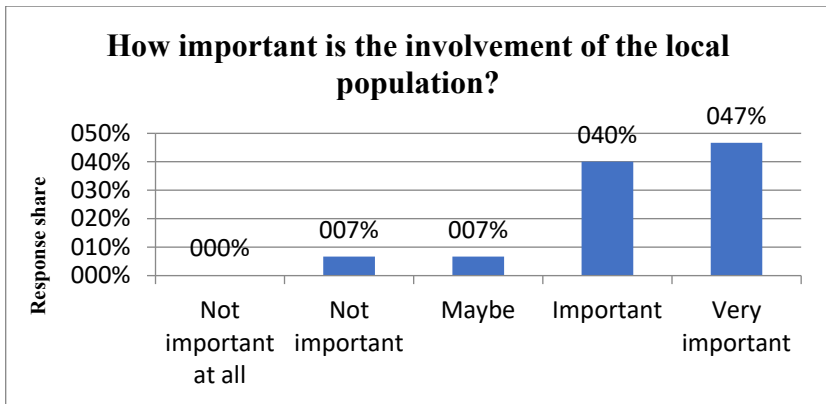
Figure 17-1. The importance of the involvement of local population in creating tourism products

Interview

The encounter with Dane Jurić,[33] the fiddle player from the region of Skradin was enabled by Patrick Levačić, PhD, who met him while making a documentary about a fiddle named Cara-Ali. In July 2017, they met in Skradin, where the complete conversation was recorded, with his consent.

The fiddler Dane presented himself in his own specific style:

Of your interest this truth may not be
I was born in nineteen forty-three
I'm a Croat, of Croatian kin
Our freedom's very dear to me

'Till my last breath there will be no stopping
To Croatian knights I will be singing
Who waged wars and died in many battles
For the only home and land that matters

I am Jurić, my first name is Dane
Mother's Kate and my father Frane
Dubravice is where I was born
As Croatian mother's only boy

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[33] Dane Jurić (fiddler), in discussion with the author, July 2017.

Dane Jurić, a fiddler from the surroundings of Skradin, immediately pointed out at the beginning of the conversation that his skill in playing the fiddle was gained exclusively through daily practice, while for the writing of texts he requires inspiration that stems largely from everyday events. Sometimes he is able to write up to 15 verses in one night. The most frequent sources of inspiration are the events that raise the reputation of the Croatian State, as well as other patriotic themes. As he states: "I have four sources that will never cease to inspire: Franjo Tuđman, my homeland, Hajduk, and Gotovina". However, his verses, apart from the patriotic themes, are often about love, sport, or heroic motives. As his inspiration he quotes fiddlers such as Mile Krajina and Andrija Kačić Miošić.

The fiddle he uses has one thick string made out of approximately seventy strands of hair taken from the tail of a horse, while the bow is made of about fifty strands. The instrument is constructed out of white maple that originates from a hilltop, since the trees are thicker there, which assures a cleaner sound. His fiddle, which is worth about one thousand euros, was constructed by Zlatko Glavinić from Neum (BiH). As Dane points out:

> I do not buy fiddles from people that build fiddles but don't know how to play them. I buy them from the ones that make fiddles and know how to use them. Such a person can surely make a good instrument.

He has been writing since childhood, while playing the fiddle was something that he started doing during the military operation, Storm. As he states, "I have taken on myself the obligation to record whatever I was able to regarding the truth about the Homeland War, either on a CD, on paper, or through a book". He learned how to play the fiddle from his friend Paško Milković, who showed him the basics of playing and how to preserve and maintain the fiddle, while the rest he learned through daily practice and perseverance. To this date, he has recorded four collections of music performed by a fiddle, and has written two books of songs, while the third one is currently being prepared. He has also had numerous performances in Croatia, Herzegovina, Germany, and Austria, as well as several television appearances on television shows such as *Supertalent* or *Živa istina*. As he states, the reactions to his performances are always positive, and he often experiences ovations. Prior to performing, he researches his audience, and the history of the region, in order to find something interesting that will catch the attention of the audience, making them listen closely until the end of the performance. He thinks that the best thing to do is to sing about the truth, because, as he says, "I don't want to lie, or make up lies. I always try to be truthful, which suits some people and displeases others. However, I

don't write this because I dislike someone, I'm just writing the truth in my own way."

When Dane started playing, other people from the surrounding villages also became interested in playing the fiddle. However, this was short-lived, so today there are no active fiddlers. As far as the younger generations are concerned, Dane feels that they are absolutely uninterested, and that the tradition is slowly becoming extinct. These issues should be addressed through the organization of gatherings of fiddle players that would, through specific programs or song themes, make fiddle playing more accessible to young people. He is also of the opinion that cheaper fiddles should be produced in larger quantities, and distributed in rural schools. In that way someone might decide to try and play the fiddle. Young people rarely have the opportunity to try these instruments, because they are not available.

Foreign tourists are less interested because they do not understand the language. There were some cases with German tourists where, during the performance, the translator translated the fiddler's verses in which he praised the German politicians Genscher and Chola as a thank-you for helping with the recognition of the Croatian State. That song was already prepared, but he was sure that if he had the opportunity to spend at least one day with the tourists, he would be able to write four to five verses about them. However, it takes some time to be able to do that. Also, on one occasion, he dressed in a folk costume and started playing in a marina near Skradin. He described the experience in the following way:

> All of the cameras that existed there…in the marina…they all came out and started recording. Later on, nobody was interested in me appearing again. One of the tourists told me that this was the only thing worth seeing in the past eight days. He said: Look there on the other side the amount of stands with nothing happening there. If you were to bring one cultural-artistic society people would be enthusiastic and it wouldn't cost a lot.

When asked whether he thinks this kind of tourism product could be offered alone, or combined with some other traditional skills, he replied that it would be better to offer it in a bundle with other skills because that would make it more interesting. When asked whether he thinks that this kind of music has to be performed in a natural environment, or whether it could be performed in coastal destinations (e.g., Zadar) or urban ones (e.g., Zagreb), he stated that the location was not important as long as there was somebody willing to listen. In his opinion, tourist manifestations based on local autochthonous customs are very important, because, as he says, Skradin is visited by a great number of tourists over the summer, and one should be able to attract them, and to know what they need, whether it is music, food,

etc. The most important thing is honesty and an autochthonous offer, because if it is false, the tourists recognize that very quickly.

Discussion

Based on the obtained results, we can conclude that respondents are aware of the role and importance of tourist manifestations based on local autochthonous customs, and that they believe that the presentation of the specificities of a destination contributes to the preservation of tradition, as well as to the construction of the identity of a tourist destination. This will assure the attraction of even more tourists, which are, according to their experience, delighted by traditional customs. Most of the respondents believe that the potential of fiddles and fiddle singing has been totally neglected, while, according to a smaller number of respondents, it is used moderately. The respondents who consider that the potential of fiddles is completely unused, state as a reason the lack of fiddlers, together with the lack of interest of tourist entities, the County, the city of Zadar, and other stakeholders in tourism, while the respondents from destinations located on the islands consider that this type of offer is more characteristic for rural areas. According to the statements, one of the key problems is actually the lack of fiddlers which arises from the disinterest of the stakeholders in tourism in this type of offer. It also emphasizes that there is no form of education that would bring the younger generations closer to this skill, contributing in turn to the preservation of this segment of tradition.

Most of the respondents gave fiddle playing and fiddle singing a low, or even very low, level of tourism valorisation because fiddle playing is not traditionally part of the coastal area of the County or the islands. A somewhat smaller number of respondents attached a medium importance to the playing, because they believe each segment of tradition to be important, and therefore that it needs to be presented in order to enrich the tourist offer. The smallest number of respondents attached a high, and very high, level of importance, due to the invaluable nature of cultural heritage, although they are partly from the hinterland, and partly from the coastal area of the County, which indicates a huge lack of knowledge from the tourism stakeholders on the islands and the seaside destinations, while the same problem is much less pronounced within the Dalmatian hinterland. The development problems of Zadar County are the absence of complete and strategic development plans for the tourism sector, and the poor development of tourism within specific local units, both in the continental

and coastal part of the county.[34] In order to achieve a positive result, it is essential to include science and industry, local stakeholders, and the public, as well as finances from development funds, which will increase the prospects and the quality of life of rural residents.[35] Furthermore, the respondents believe that a more efficient valorisation can be achieved by organizing folklore evenings during which (or independently) the art of fiddle playing and singing will be presented. They also emphasize that, due to the attractiveness of the offer, the program of events should include an educational presentation of fiddle singing and playing, as well as a presentation of the production of fiddles. According to the experience of the interviewed fiddler, this skill is most easily understandable, and transferable to tourists from our speaking area, while in relation to foreign tourists there is a certain linguistic barrier that needs to be overcome, which confirms the statements of the respondents that a successful engagement of all stakeholders is needed for the successful implementation of this skill within the tourist offer. Furthermore, as the interview tells us, this problem can still be overcome by the additional training of tourist guides who would simultaneously translate the verses during the performance, and would be able to explain the skill and its significance from a technical and historical point of view. All respondents believe that this form of tourism valorisation can contribute to the preservation of the intangible cultural heritage of our regions. The vast majority of respondents agree that it largely contributes to the preservation, while fewer respondents agree on a medium contribution. There is, however, a kind of imbalance between the current tourist offer content and the necessary content, which would, through the introduction of fiddles and fiddle singing, contribute to heritage preservation. Although the respondents are aware of the importance of tourism valorisation of fiddles and fiddle singing, they do not act beyond the current state of affairs.

According to the opinion expressed by the respondents, fiddles and fiddle singing should be offered as part of a package with other tourist products, such as traditional dances, autochthonous food, and tourists' participation in rural households, and other traditional music and activities. Also, to a lesser extent, it is their opinion that the offer should include

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[34] Jurica Bosna, and Aleksandra Krajnović, "Prijedlog modela izgradnje i upravljanja regionalnim turističkim brendom Dalmacije," *Tranzicija*, 17.36, (2016): 97, accessed October 27 2017, https://hrcak.srce.hr/158310

[35] Andrea Russo et al., "Dalmatinska zagora–neotkriveni potencijali razvoja zdravstvenog i sportsko-rekreacijskog turizma u Dalmatinskom zaleđu," *Stanje i mogućnosti zdravstvenog i sportsko-rekreacijskog turizma* (Čakovec: Međimursko veleučilište u Čakovcu, 2012), 96, accessed November 14 2017, https://konferencija.mev.hr/dokumenti/zbornik_konferencija_tisak.pdf.

autochthonous forms of accommodation, the participation of tourists in agricultural work, and village activities, and should combine the whole with contemporary music. The smallest number of respondents would include cycling, walking and north-walking trails, while combining the whole with orchestral music. It is interesting to notice that none of the respondents would include sports or business tourism. This indicates, as it has already been stated, that additional training of tourism workers is needed, which would allow them to see all of the possible combinations with this artistic form, and to perceive the broader context and the potential for this kind of offer. It is not necessary to connect the autochthonous element with an autochthonous element. Combinations of different kinds of elements are also possible, in order to bring the product closer to different groups of tourists who, for example, in addition to the already known offer, can have even more memorable experiences. This type of offer, however, does not necessarily have to be the main attraction, or even to be a large part of the attraction. It is enough for it to make up a small portion of the offer, and in such a way, to 'spice up' something that is already known to have a unique effect. Furthermore, the vast majority of respondents believed that this type of music can be performed anywhere outside of its natural environment, which is emphasized by the interviewee, who stated that it is not relevant where music is being performed, but whether there is anybody that is willing to listen to it. However, fewer respondents argued that this kind of music is best performed in a natural environment, and they were also right, because any traditional art is best experienced within its natural environment. In this way, an event can be experienced on a much deeper level, making it a unique and unrepeatable experience that would not have the same effect if performed within an urban environment. However, a performance within different environments should not be dismissed, since authentic art is just as valuable, regardless of the context within which it is being is performed.

Most of the respondents confirmed that they would like to be involved in creating and conducting such a form of tourism, as they consider fiddles to be part of our tradition, and a way to enrich the current tourist offer. A smaller number of respondents explained their negative answer by stating the lack of fiddle playing tradition, and the belief that neither the local inhabitants nor the tourists would recognize fiddle playing and singing as something autochthonous. The residents of the islands, the shores, and the hinterland, consider fiddle playing as part of the tradition, while on the other hand, other respondents from the same locations but from different municipalities (and therefore different tourist boards) do not consider this to be the case. This confirms that there is a worrying lack of knowledge on the part of the stakeholders in tourism, and it stresses the need for additional

education of the staff working in these institutions, in order not only to increase knowledge, but to change the future perception of less well-known segments of our tradition. The respondents who confirmed their involvement pointed out the inadequate effect of individual initiatives, and their belief that it is necessary to include all relevant stakeholders throughout the County, together with the support of experts. However, they did agree that such a type of attraction could fit into existing manifestations at the level of individual tourist boards and municipalities, as well as regarding the need for various seminars, themed evenings, and festivals featuring individual presentations of fiddle playing and singing. In addition to that, they also proposed exchange programs that would develop cooperation with other parts of the County and beyond. This would increase the strength and attractiveness of individual destinations, becoming in such a way more interesting to tourists. Dalmatia has an enormous potential to develop a diverse tourist offer, while at the moment, its main tourist offers are the sun and sea, accompanied by the additional problem of a lack of adequate advertising. Namely, a strong engagement is needed in order to start the initiative of the local community and all other related segments, in order to achieve sustainability and a consistency of the tourist offer at the County level, as well as throughout the country.[36] The 'tourist nomads' of today are constantly searching for new locations and specific ways in which to take advantage of their vacation time, while simultaneously getting acquainted with authentic and autochthonous values of the home environment, with an emphasis placed on forgotten skills or lifestyles.[37] Furthermore, the respondents believed that a successful implementation of fiddles and fiddle singing within the tourist offer would require a certain amount of funds to be invested, in order to create an attractive context, or a so-called 'fiddle storytelling' which would attract tourists. One of the comparative advantages of rural areas or rural tourism is certainly traditional music. The comparative advantages can be transformed into competitive ones, solely through the element of experience that comes from entertainment, education, admiration, and aesthetics.[38]

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[36] Jurica Bosna, and Aleksandra Krajnović, "Prijedlog modela izgradnje i upravljanja regionalnim turističkim brendom Dalmacije," 99.

[37] Aleksandra Krajnović et al., "Strateško upravljanje razvojem ruralnog turizma–problemi i smjernice," *Oeconomica Jadertina*, 1.1, (2011): 31, accessed October 14 2017, https://hrcak.srce.hr/68201.

[38] Tihana Sudarić, "Ekonomija doživljaja u ruralnom turizmu," *48. hrv. i 8. međ. simpozij agronoma u Dubrovniku*, (2013): 217, accessed December12, 2017, http://sa.agr.hr/pdf/2013/sa2013_p0222.pdf.

The largest number of respondents stated that they believed that the involvement of the local population is important, or very important. Conflicts and tensions within the domestic population can arise, if its history and culture are inappropriately represented, or if the interpretation of tradition is falsified in order to attract tourists to a particular destination.[39] The local population must be included in the project in order to confirm the credibility of the offer on the basis of a direct contact between the host and the tourists. In this way, tourists can experience the authenticity and autochthones of a particular offer, based on stories, tales or lifestyles. Moreover, the respondents believed that the greatest contribution of this type of tourism valorisation of fiddles and fiddle singing is the preservation of the tradition and the development of rural tourism within the Dalmatian hinterland.

Conclusion

This chapter looked at whether there was any type of initiative or at least a willingness of the tourist boards and municipalities to incorporate fiddles and fiddle singing, being a forgotten and unjustifiably neglected segment of tradition in this region, into the tourist offer of Zadar County. According to the results of the research, we have determined that there is willingness for such activities, even though no significant steps forward have been made, except at the local level. The only positive example is the municipality of Benkovac, which includes and emphasizes the appearance of a fiddler as part of a festival of traditional instruments.

In order to promote the development of cultural tourism, it is necessary to adopt new knowledge and new skills, and to educate young people in order to develop awareness about the importance of tradition from the earliest age. The 'experience economy' can be shaped in a quality manner through the synergy of knowledge, skills, and education. The experience stems solely from true events, whether they are real, traditional, or inspired by events derived from film, art, fiction, etc. Today's guest wants to be active, and he/she desires an experience, and this can only be achieved through a conceptual approach that will create and deliver a quality experience. In this way, an unbreakable bond is created with the destination,

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[39] Ivana Paula Gortan-Carlin, and Ivona Orlić, "Ponuda i potražnja autentičnosti u glazbeno-turističkom doživljaju Istre: Ceste glazbeno-tradicijskih manifestacija," *Problemi sjevernog Jadrana*, 13 (2014): 123, accessed November 18 2017, http://bib.irb.hr/prikazi-rad?rad=751680.

turning each guest into a promoter, and allowing for exponential promotional growth.

It should be noted that all respondents consider this form of tourist offer important, regardless of the location of the tourist boards and municipalities. We can therefore conclude that if some of the key stakeholders would initiate the project, other tourist boards and municipalities would join, allowing through such joint forces and resources, a faster and easier tourism-based valorisation of fiddles and fiddle singing. Likewise, a joint investment in promotion would significantly improve the recognizability of fiddles and fiddle singing as part of a tourist offer.

Conclusively, it can be stated that the global tourist scene is actually a reflection of modern society, which, on one hand loses its own identity within the process of globalization, while on the other hand, the autochthonous content acquires an increased importance within the tourist offer, and thus contributes to the preservation of tradition and culture, which in turn leads to the strengthening of identity. We must not forget that by not emphasizing our own diversity and uniqueness, we fall behind in the race with the rest of the world, although we are not the only ones to lose, since the tourists also lose the opportunity to experience something unique.

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TOPIC VII:

EDUCATION IN THE FIELD OF DIGITAL HUMANITIES

Chapter 18

Designing a Master programme in digital humanities: the case study of Linnaeus University, Sweden

Koraljka Golub and Marcelo Milrad

Abstract

In this work, we discuss the rationale and niche for a new interdisciplinary Master of Arts in Digital Humanities programme at Linnaeus University. The process was initiated in 2016, and the plan is to start with the programme at full scale in the autumn semester of 2020. During this time, issues such as whether to introduce such a programme in the first place, and how to implement it, have been addressed, especially in the light of digital humanities being a rapidly developing field, and having in mind that the field includes all humanities disciplines, as well as social sciences, economics, and engineering disciplines. Furthermore, the strong local drive to collaborate with external partners, coming from the public and private sectors, has also been dealt with, thus strengthening the programme further. In this process, apart from intensive discussions among colleagues at the University and beyond, several approaches were taken: a survey of experts in the field, a focus group of public sector representatives, a SWOT analysis, a pilot course, and a survey of students who took it. We conclude this work by bringing together some reflections and lessons learned in the process of establishing and designing this Master's programme.

Keywords: masters in digital humanities, cross-sector collaboration, cross-disciplinary collaboration

Introduction

The number of educational programmes in digital humanities has grown sharply over time, beginning in 1991, and increasing steadily by several programmes each year since 2008.[1] While the field of digital humanities (DH) derives from humanities computing, whose origins reach back to the late 1940s, the term 'digital humanities' emerged at the beginning of the 2000s and is still a rapidly evolving field with a varied range of definitions assigned to it by different scholars.[2] The rationale for the terminological change has been to prevent the field from being viewed as mere digitization; today the field is considered to be much more, significantly increasing its complexity. In this paper, DH is viewed broadly, and considered to be an area of scholarly activity at the intersection of the disciplines of humanities and computation. It brings digital tools and methods to the study of the humanities. By producing and using new software applications, tools and techniques, DH makes it possible to develop new approaches to teaching and research, while at the same time studying and critiquing how these impact various aspects of cultural heritage and digital cultures. Thus, DH both employs information and communication technologies (ICT) in the pursuit of humanities, and subjects technology to humanistic questioning and interrogation.

In more concrete terms, DH embraces a variety of topics, including examples such as the following: digitisation of cultural heritage and establishment of related infrastructures; curation of online collections of data and information objects across cultural heritage institutions; knowledge representation (acquisition, encoding, processing, representation, linked data); user interfaces for interactive access to digital cultural heritage; digital publishing; data mining of large cultural data sets, including online cultural heritage collections, historical newspapers, web archives, and social media; critical/reflexive dimensions resulting from DH; and digital transformation in a wide range of contexts.[3] Methodologies target both

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[1] Sula, Chris Alen, S. E. Hackney, and Philipp Cunningham, "A Survey of Digital Humanities Programs", in: *DH2017: Digital Humanities 2017*, Montreal, Canada, August 8-11 (2017), accessed May 28 2018,
https://dh2017.adho.org/abstracts/232/232.pdf.
[2] For a detailed overview, see Melissa Terras, Julianne Nyhan, and Edward Vanhoutte. *Defining Digital Humanities: A Reader* (Brookfield: Ashgate, 2013)
[3] See, for example, Anne Burdick, *Digital Humanities* (Cambridge, Mass.: MIT Press, 2012); Eileen Gardiner, and Ronald G. Musto, *The Digital Humanities: A Primer for Students and Scholars* (New York, NY: Cambridge University Press, 2015); Julie Thompson Klein, *Interdisciplining Digital Humanities: Boundary Work*

digitized and born-digital materials, and text as well as multimedia and dynamic environments, including approaches from traditional humanities disciplines (history, philosophy, linguistics, literature, art, archaeology, music, cultural studies, information studies) with tools provided by computing (e.g., hypertext, hypermedia, data and information visualisation, information retrieval, statistics, data mining, text mining, digital mapping). As a result of these intersections, DH scholars use computational methods to answer challenging, traditional research questions, as well as new ones which ensue from digital transformations, thereby often also pioneering new approaches.

While DH incorporates a vast number of topics, also going beyond major disciplinary groups (humanities and engineering), at the same time, it is still a fast developing one. It makes a new university programme in DH a complex endeavour. This work describes the process, and discusses decisions made related to the conceptualization and introduction of the DH Master programme at Linnaeus University (LNU) in south-eastern Sweden. The programme is now in the final phases of development and is planned to start in 2020. Reported here, are developments that took place in the period between February 2016 and May 2018. To this extent, the following activities have been conducted: three exploratory surveys (of DH experts, of representatives from external sectors in the region, and of students taking a pilot course developed as part of our upcoming master programme called *Programming for Digital Humanities*), a SWOT analysis, scanning of similar efforts elsewhere, and discussions with colleagues leading other interdisciplinary programmes at LNU, as well as those from other Nordic and European universities involved in DH education at various levels.

The remainder of the paper is structured as follows. The next section, *Background*, provides the context for the DH Masters at LNU. Thereafter, the section *Related Research* provides a brief overview of how DH is established as a research field, and of related published research on DH education. A section on *Methodology* follows, which presents the methods we have used. The *Results* section presents the results learnt from the surveys. Major implications for the DH Master's are discussed, based on all the methods combined, in the *Discussion* section. Towards the end, *Implementation* outlines the content and administrative aspects, and the section *Concluding Remarks* gives major conclusions and points to future actions.

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in an Emerging Field (Ann Arbor: University of Michigan Press, 2015); Terras, Nyhan and Vanhoutte. *Defining Digital Humanities: A Reader*.

Background

The proposed DH Master's programme was born out of the Digital Humanities Initiative at LNU[4] started in February 2016.[5] The Initiative builds on the potential of the two-way interactions between society and information and communication technologies (ICT), with a focus on the humanities to become a key success factor for the values and competitiveness of the entire region surrounding LNU, having in mind recent EU and Swedish political discussions in the field of digital humanities.[6] The main goals of the initiative in the first phase (2016-2017) were to establish the niche for DH at LNU, as well as to identify DH strongholds specific for the University. The former included establishing the foundations for the creation of a DH educational programme; the latter focused on ten pilot projects grouped around three major areas: 1) Digital story telling / E-entertainment; 2) Interactive visualization / Social network analysis; and, 3) Data curation.[7] The long-term vision is to create a leading education, development, and research regional centre that combines, in novel ways, already existing expertise from the different LNU departments and faculties working in close collaboration, and co-creation with people and different organizations (both public and private sector) from the surrounding society.

By 2016, LNU's work could already be characterized by novel activities and efforts when it comes to teaching and research in the field of DH. The

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[4] Digital Humanities Initiative at LNU, accessed May 28 2018, https://lnu.se/en/digihum.

[5] Koraljka Golub, and Marcel Milrad, "Digital Humanities as a Cross-Sector and Cross-Discipline Initiative: Prospects in the Linnaeus University Region," in: *3rd International Conference on Behavioral, Economic, and Socio-Cultural Computing*, Duke University, Durham, NC, USA, 11-13 November 2016, 136-137.

[6] European Commission. *Horizon 2020: Social sciences & Humanities*, (2016), accessed May 28 2018, https://ec.europa.eu/programmes/horizon2020/en/area/social-sciences-humanities; Vetenskapsrådet Rådet för forskningens infrastrukturer. *Områdesöverikt för forskningens infrastrukturer*, (2014), accessed May 28, 2018. http://www.vr.se/download/18.2302fa711489c4798d4a35fa/1411461229423/Samtliga+områden+infrastruktur.pdf.

[7] For some examples see: Koraljka Golub, and Marcel Milrad (eds.), *International Symposium on Digital Humanities, Växjö 7-8 November 2016: Book of Abstracts* (Växjö: Linnaeus University, 2016); Koraljka Golub, and Marcel Milrad (eds.), *DH 2016. Digital Humanities 2016: Extended Papers of the International Symposium on Digital Humanities (DH 2016),* Växjö, Sweden, November, 7-8, 2016. CEUR, 2017, accessed May 28 2018, http://ceur-ws.org/Vol-2021/.

following are examples of current areas of activities: text-analytic techniques, categorization, and data mining; social network analysis (SNA) and bibliometrics; metadata and tagging; geographic information systems (GIS); multimedia and interactive games; visualisation; media; and big data. In addition, the Centre for Learning and Knowledge Technologies (CELEKT)[8] established in 2004, has been particularly active in multi-disciplinary research and innovation in collaboration with the private and public sector, with many projects related to DH. Currently, the DH Initiative at LNU includes a significant number of teachers and researchers from LNU, other (inter)national universities, and the public and private sectors. Colleagues at LNU come from nine departments, spanning four faculties:

1) Faculty of Arts and Humanities:
a. Department of Cultural Sciences (with the following subject areas represented in DH: archaeology, comparative religion, cultural sociology, geography, history, library and information science,);
b. Department of Film and Literature (comparative literature, creative writing, film studies; also including Linnaeus University Centre for Intermedial and Multimodal Studies);
c. Department of Languages (with English represented in DH);
d. Department of Media and Journalism (media and communication science, media production and journalism); and,
e. Department of Music and Art (arts).
2) Faculty of Technology:
a. Department of Computer Science and Media Technology (computer science, media technology); and,
b. Department of Informatics.
3) School of Business and Economics:
a. Department of Marketing.
4) Faculty of Health and Life Sciences:
a. Department of Health and Caring Sciences.

Additionally, we have collaborators coming from 19 countries spread over five continents. These include our external advisors, as well as representatives of external public and private sectors.

By 2017, LNU has given life to several related efforts across inter-disciplinary and cross-sector axes. These include two Master's programmes which served as models on how to organize the forthcoming DH Master's. One is a Master's in e-Health, which is a collaboration between the Faculty of Health and Life Sciences, the Faculty of Technology and the School of

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[8] Centre for Learning and Knowledge Technologies–CELEKT, accessed May 28 2018, http://www.celekt.info.

Business and Economics.[9] In this Master's, one department at the Faculty of Health and Life Sciences introduced e-health as a new subject of study, and the same department owns the programme. Courses hosted by the other two faculties are owned by the respective faculties. Contracts among the three faculties have been established in order to sustain the programme into the future.

The Master's programme titled "Innovation through Business, Engineering and Design" was started several years ago, and is a collaboration between the Faculty of Arts and Humanities, the Faculty of Technology, and the School of Business and Economics. Three existing subjects of study have been merged into one in this programme. The mode of operation is such that each of the faculties owns its version of the programme which is taught collaboratively.[10] (For a discussion on how the interdisciplinary DH Master's will be implemented at LNU see the section entitled *Results*).

In addition, a research centre of excellence in Data Intensive Sciences and Applications (DISA)[11] was established in 2017, including eight research groups, one of which is Data Intensive Digital Humanities. Finally, an iSchool,[12] called iInstitute,[13] brings together a range of current and planned programmes related to the Field of Information (iField), where the future DH Master's is one of the major nodes. All these efforts have served as pioneering new models of collaborating across disciplinary and institutional boundaries, at the University and with external sectors, also paving the way for the DH Master's.

Internationally, in 2016, LNU became the first Swedish university to join DARIAH-EU,[14] as a collaborative partner. DARIAH-EU, a Pan-European infrastructure for arts and humanities scholars working with computational methods was developed, comprising over 300 researchers in 18 countries, thereby opening up opportunities for international collaboration and projects. In the same year LNU organized the International Symposium

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[9] Master's programme in e-Health, the Faculty of Health and Life Sciences, the Faculty of Technology and the School of Business and Economics, accessed May 28 2018, https://lnu.se/program/masterprogram-i-ehalsa/distans-deltid-ht/, in Swedish.

[10] For example, see
https://lnu.se/en/programme/innovation-through-business-engineering-and-design-specialisation-design-master-programme/vaxjo-international-autumn/,
accessed May 28 2018, describing a specialisation in Design.

[11] Data Intensive Sciences and Applications (DISA), https://lnu.se/en/DISA, accessed May 28 2018.

[12] iSchool, accessed May 28 2018, http://www.ischools.org.

[13] iInstitute, accessed May 28 2018, https://lnu.se/en/iinstitute.

[14] DARIAH-EU, accessed May 28 2018, http://dariah.eu.

on Digital Humanities[15] within which the first meeting of the Nordic Hub of DARIAH-EU was held. A major aim of the Nordic Hub is to foster collaboration in DH education across the Nordic countries, with the purpose of enabling elective courses across DH to be held by experts in the topic at hand, to allow flexible collection of points towards a degree across Nordic universities (e.g., University of Aarhus' summer schools in DH, free-standing online courses, combined with existing DH programmes). Related, is an organisation named Digital Humanities in Nordic Countries (DHN), a branch of EADH (European Association for Digital Humanities), formed in 2015, and organizing regular annual conferences in Nordic countries since 2016. In 2017, a DH education workshop was held for the first time, envisioned as a regular annual event.[16] A working group on DH education in DHN has been proposed to be established, to further foster collaboration in DH education across the Nordic countries.

In summary, the context of cross-departmental, cross-sectoral and international collaboration, both within the DH initiative and the University as a whole, laid out the foundation to build a DH Master's programme, as discussed below.

Related Research

Internationally, DH is a well-documented scholarly strand, where activities are taken at research and education levels. Many textbooks have been written on digital humanities, and journals devoted to the subject include *Digital Humanities Quarterly* (DHQ), *DH Commons, Digital Scholarship in the Humanities* (DSH), and *Journal of Digital Humanities* (JDH), to name a few. The number of DH programmes (at Bachelor, Master's and Doctoral levels) has risen sharply over time, beginning in 1991 and growing steadily by several programs each year, especially since 2008. A registry of programmes and courses in DH, as of 28 May 2018, lists 164 active European programmes and courses.[17]

Of organizations, the Alliance of Digital Humanities Organizations (ADHO), established in 2005, has acted as a key international association

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[15] https://lnu.se/en/research/searchresearch/digital-humanities/symposium-november-2016/, accessed May 28 2018.

[16] https://lnu.se/en/research/searchresearch/digital-humanities/workshop-higher-education-programs-in-digital-humanities-challenges-and-perspectives/, also held in 2018, https://lnu.se/en/research/searchresearch/digital-humanities/workshop-helsinki-2018/, accessed May 28 2018.

[17] Registry of programmes and courses in DH, accessed May 28 2018, https://registries.clarin-dariah.eu/.

which supports digital research and teaching, and advises its member associations from around the world, including the European Association for Digital Humanities (EADH) which has been overseeing the annual Digital Humanities conference since 2006. An international network of digital humanities centres, centerNet, formed in 2007, today numbers about 100 centers in 19 countries, hosted, by, among others, universities like Stanford, Yale, Princeton, Columbia, Brown, and Oxford. Since 2006, DARIAH, a Pan-European infrastructure for arts and humanities scholars working with computational methods, has been developed. In Nordic countries, an organisation named Digital Humanities in Nordic Countries (DHN), a branch of EADH, was formed in 2015, and has been organizing regular annual conferences in Nordic countries since 2016. The Nordic Hub of DARIAH is another entity aimed at promoting DARIAH's aims and objectives with focus on Nordic countries.

In Sweden, institutionalized centres for DH research include Humanities Lab (HumLab) at Lund University, HumLab at Umeå University, and the Centre for Digital Humanities at Gothenburg University. The latter also provides a campus Master's programme in digital humanities, and it enrolled its first students during the autumn semester of 2017. The University of Borås has been hosting the *Human IT* journal since 1997.

Examples of European universities which allow taking a Bachelor's or Master's-level degree in digital humanities, listed in the DARIAH course registry mentioned above, are the following:

1. Catholic University at Leuven, MSc in Digital Humanities;
2. Ecole Polytechnique Fédérale de Lausanne, MSc in Digital Humanities;
3. Julius-Maximilians University at Würzburg, BA in Digital Humanities, MA in Digital Humanities;
4. King's College London, which has its own Department of Digital Humanities, offers, among others, MA in Digital Humanities, MPhil / PhD in Digital Humanities Research;
5. Maynooth University, MA in Digital Humanities;
6. Rijks University at Groningen, MA in Digital Humanities;
7. Stuttgart University, MA in Digital Humanities;
8. Trinity College Dublin, MPhil in Digital Humanities and Culture;
9. University College Cork, BA in Digital Humanities and Information Technology; MA in Digital Arts and Humanities;
10. University of Bologna, MA in Digital Humanities and Digital Knowledge;
11. University of Lausanne, MA in Digital Humanities;
12. University of Nova Gorica, MA in Digital Humanities;
13. University of Pisa, MA in Humanistic Informatics–Digital Humanities.

In the light of problems related to perception and lack of funding of humanities disciplines at universities today, digital humanities are well positioned to strengthen the role of the humanities in society, which is why universities should strongly promote it.[18] Considering the increase in positions advertised in DH, although diverse across countries,[19] a large number of different types of universities are now (considering) implementing some training in the digital humanities.[20] Previous research which focused on the development of programmes at specific institutions covers different levels of education. This includes DH assignments within existing courses,[21] new DH courses,[22] new DH undergraduate programmes,[23] new DH graduate programmes,[24] and new DH PhD programmes.[25]

While advantages in DH programmes such as interdisciplinarity, collaborative modes of working and acquiring experience in emerging

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[18] Matthew K. Gold (ed.), *Debates in the Digital Humanities* (Minneapolis: University of Minnesota Press 2012)

[19] Brian Croxall, "DH2013: The Future of Undergraduate Digital Humanities", (2013) accessed May 28 2018, http://www.briancroxall.net/events/9/the-future-of-undergraduate-digital-humanities/; Manfred Thaller et al., "Digital Humanities as a University Degree: The Status Quo and Beyond," in: ADHO 2012, accessed May 28 2018,
http://www.dh2012.uni-hamburg.de/conference/programme/abstracts/digital-humanities-as-a-university-degree-the-status-quo-and-beyond/.

[20] Croxall, "DH2013: The Future of Undergraduate Digital Humanities".

[21] Mills Kelly, "Visualizing Millions of Words," in: *Debates in the Digital Humanities,* edited by Matthew K. Gold. (Minneapolis: University of Minnesota Press 2012)

[22] See, e.g., Johanna Drucker, John J. Unsworth, and Andreas Laue, "Final Report for Digital Humanities Curriculum Seminar," Media Studies Program, College of Arts and Science: University of Virginia, (2002), accessed May 28 2018,
http://www.iath.virginia.edu/hcs/dhcs/.

[23] See, e.g., Douglas Walls, "In/Between Programs: Forging a Curriculum between Rhetoric and the Digital Humanities," in: *Rhetoric and the Digital Humanities*, edited by Jim Ridolfo and William Hart-Davidson (Chicago: University of Chicago Press 2015),

[24] See, e.g., Stefan Sinclair, and Sean W. Gouglas "Theory into Practice A Case Study of the Humanities Computing Master of Arts Programme at the University of Alberta," *Arts and Humanities in Higher Education*, 1 (2002) (2): 167-83.

[25] See, e.g., Willard McCarty, "The PhD in Digital Humanities," in: *Digital Humanities Pedagogy: Practices, Principles and Politics*, ed. by Brett D. Hirsch. (Open Book Publishers 2012), accessed May 28 2018,
http://www.openbookpublishers.com/product/161/digital-humanities-pedagogy--practices--principles-and-politics.

technologies, are often emphasized,[26] and different challenges have led to the disappearance of a number of programmes in humanities computing (a predecessor to DH). Thaller et al.[27] name the reasons as: insufficient resources when starting the programme; making courses dependent on one person; restricting the degree to a narrowly defined subfield which prevents large participation; lack of clarity regarding opportunities such as jobs for students; and too much focus on the computational side of DH which makes it hard for students from humanities backgrounds to follow.

Croxall[28] organized a panel which targeted questions similar to the ones we have been asking from the start of our DH discussions, such as whether DH should be based within a particular department or should be taught across all humanities departments, how to design appropriate curricula, which aspects of DH to focus on (DH as a field, digital tools, digital critical thinking), etc. Smith[29] discusses whether digital humanities programmes should be structured around a common core of learning objectives or not, the relationship between digital humanities curricula and demand in the workforce, and the balance between specific skill development versus methodologies, and between critical perspectives on technology and its application, for an overview of the proper balance of technical skills and reflection in DH, i.e., to what degree programming should be taught, in relation to methodologies and critical thinking.[30]

Methodology

The need to establish the DH Master's at LNU as presented has been identified via three exploratory surveys and two complementary activities, conducted in the period from February 2016 to May 2018. In more detail, these included:

a) An email survey of academic experts outside the LNU;
b) A survey of students taking the pilot course called Programming for Digital Humanities, mentioned above; and,

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[26] See, e.g., Sinclair, Stefan, and Sean W. Gouglas, "Theory into Practice A Case Study of the Humanities Computing Master of Arts Programme at the University of Alberta," *Arts and Humanities in Higher Education*, 1 (2002) (2): 167-83.
[27] Thaller, et al. "Digital Humanities as a University Degree: The Status Quo and Beyond".
[28] Croxall, "DH2013: The Future of Undergraduate Digital Humanities".
[29] David Smith, "Advocating for a Digital Humanities Curriculum: Design and Implementation," presented at *Digital Humanities 2014*, Lausanne, Switzerland, 2014, accessed May 28 2018, http://dharchive.org/paper/DH2014/Paper-665.xml.
[30] See Sula et al. "A Survey of Digital Humanities Programs".

c) A focus group interview of public sector representatives from Blekinge, Kalmar and Kronoberg.[31]

In addition, several complementary activities have also been conducted:

d) A SWOT analysis of the DH Initiative;[32]
e) A scanning of similar efforts, including discussions with colleagues leading other interdisciplinary programmes at LNU, as well as those from other Nordic and European universities involved in DH education at various levels. This involved exchanges within the DH Master's Board with representatives from Lund University, the Faculty of the Arts and Humanities, the Faculty of Technology, and the School of Business and Economics at LNU.

In order to inform the development of the DH programme in 2016, an exploratory survey of experts involved in DH at other institutions was conducted (a). The survey was to inform about the potential for, and challenges of, creating a DH programme at LNU. It was implemented as an email questionnaire comprising 10 questions, sent out to 28 colleagues outside LNU, working within DH. This can be classed as convenience sampling, since the colleagues were known to the authors. Of these, 24 were academics employed at universities, and four were representatives from other public sectors. They came from Europe (24), Australia (2) and North America (2 from United States). European countries represented in the sample were: Sweden (9), Croatia (5), Finland (4), Norway (2), Denmark (1), Italy (1), United Kingdom (1) and Ireland (1). The survey was sent out on 15 July 2016 and nine replies were received by 30 August 2016.

In order to improve the first course, given as an independent, pilot instance of the course titled Programming for Digital Humanities, during the autumn semester of 2017, an exploratory survey of students who signed up for that course was conducted. The purpose of this evaluation was also to determine how we can teach students from different backgrounds, disciplines, and countries (this course is given in the on-line mode) since this will be a common classroom context in the planned DH programme.

[31] Billore, Sonja, and Koraljka Golub, "Digital humanities: an exploration of a new programs in higher education and its meaning making by community partners," in: Koraljka Golub, and Marcelo Milrad (eds), *Extended Papers of the International Symposium on Digital Humanities (DH 2016)*: Växjö, Sweden, November, 7-8, 2016, 19-25. CEUR-WS.org, 2021.
[32] Golub, Koraljka, and Marcel Milrad, "Digital Humanities as a Cross-Sector and Cross-Discipline Initiative: Prospects in the Linnaeus University Region," in: *3rd International Conference on Behavioral, Economic, and Socio-Cultural Computing*, Duke University, Durham, NC, USA, 11-13 November, 2016, 136-137.

While a formal evaluation survey, typically conducted by LNU for all courses, was submitted via email at the end of the course to all students registered for the course, only five replies were received. Therefore, the authors of the paper approached all other students individually and asked them for general comments about what was good about the course and what could be improved. In addition, one student was interviewed in person. This evaluation was conducted in the period from 15 January till 15 May 2018. In total, feedback on the course has been received by 22 different students.

Results

Reported here are results from the survey of experts (a) and the survey of students (b). For more information about the outcomes with the focus group (c) and SWOT (d), please see Billore and Golub[33] and Golub and Milrad[34] respectively.

Survey of Experts

The questionnaire comprised ten open questions on the type of knowledge to be included in the programme including special strengths at LNU, job opportunities, requirements to enter the programme, and interest in collaboration (Appendix 1).

The nine received replies came from Sweden (4), Finland (2), Denmark (1), Australia (1), USA (1), of which two were representatives of public sectors. One of the respondents kindly passed the questionnaire onwards to two other colleagues of hers, one from the public sector, and one from the private sector; their replies are also included below. The replies are presented based on qualitative analysis that focused on identifying topics relevant for development of the DH Master's at LNU.

When it comes to the kind of knowledge and skills to include in the programme, there seems to be a need for a balanced mix of technical skills to allow usage of digital tools, and content-related skills to address real humanities (and thus to avoid 'meaningless technology demonstrations'), as well as critical skills and understanding of alternatives in order to be able to decide whether (non-) digital tools are most appropriate, etc. In addition, the general aim of the DH Master's needs to be defined, in order to define the knowledge and skills to be included. A combination of foundational,

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[33] Billore, and Golub, "Digital humanities: an exploration of a new programs in higher education and its meaning making by community partners."
[34] Golub, and Milrad, "Digital Humanities as a Cross-Sector and Cross-Discipline Initiative: Prospects in the Linnaeus University Region."

mandatory, courses, and electives is recommended. Further, the programme needs to be taught by teachers of different relevant backgrounds who can 'speak the same language' in order to teach technically-oriented students to understand humanities research questions, and humanities students to know what is possible to achieve with digital tools.

As to the previous students' background, the respondents seemed to be rather open to accepting a mixed group of students in the programme, possessing any Bachelor's degree or equivalent working experience. In order to support this, there is a need to introduce both the humanities and technical aspects of the DH field, in order to bring students of varied backgrounds to the same level of understanding. In addition, this demands that a wide variety of courses is included to cater for the varied groups of students.

There seems to be a variety of tasks and jobs a DH graduate may be able to take on: jobs in the cultural heritage sector at all levels; jobs in the local and national governmental sector; positions within a company or an organisation requiring communicative and analytical skills which could be relevant for this kind of programme; academic research positions; consulting positions. Furthermore, a DH person who has acquired a mixed set of knowledge and skills is well positioned to acquire jobs and perform tasks in the current and future institutions related to cultural sectors and academia. Information technology aspects are normally taught from just that perspective, and humanities aspects from the latter. A combined set of knowledge seems to present a clear advantage, also when it comes to the ability to work in multidisciplinary teams.

Depending on the specific aims and content of the programme, the Master's could be of particular interest to a good range of target students: people from all backgrounds, especially those looking to acquire more technical skills and knowledge; already working professionals who are looking for an opportunity to develop their knowledge in a new area, in particular those from the academic sectors, as well as from libraries, archives, and museums; IT staff of various kinds, including IT professionals between jobs looking for career readjustment and continuous education; and scholars looking for job opportunities in future economics.

The job market is there, in that different knowledge and skills pertinent to DH are needed to ensure agility and development in the university and public sectors. On the other hand, the jobs vary widely in requirements, and students' competitiveness will be a result of the DH programme combined with the students' previous background, since it is impossible to teach all DH skills in one programme.

Cross-disciplinary and cross-sector collaboration seems to be identified as a unique aspect of the DH Master's at LNU. Engaging external sectors into the DH programme is possible in a number of ways: active participation in programme development, invited talks, co-mentorship of theses based on real-life examples, and research collaboration. Engaging GLAM seems easier than in the private sector. The respondents themselves were also open to collaboration in the future.

Survey of students taking the Programming for Digital Humanities course

In the Fall term of 2017, the first instance of a course titled "Programming for Digital Humanities" (15 ECTS credits) was started at Linnaeus University (LNU). It was carried out in order to determine the potential for making such a course permanent, as well as to serve as an indicator of the general interest of future students in the full DH Master's programme. We wanted also to acquire a use case within which to determine any potential challenges of teaching an online course in programming to students with a wide variety of backgrounds.

This particular course was given in English, at 50% pace. It is equivalent to 15 ECTS credits (400 hours of study). It ran during the period between August 30 2017 and January 12 2018. The delivery mode was online, with six obligatory live online lectures. First advertised in the spring of 2017, mostly on international mailing lists in the DH field, the number of applicants was close to 100, of whom 40 were admitted.

The aim of the course (http://kursplan.lnu.se/kursplaner/syllabus-4ME501-1.pdf) was to introduce and discuss fundamental concepts and techniques related to programming in the DH field. The students were expected to acquire knowledge and practical experience that would allow them to use programming (with focus on Python) in the Arts and Humanities, and apply different programming techniques to analyse and interpret the subject matter at hand in novel ways. The course had a strong emphasis on examples from DH, rather than Python programming in general. This is why the course was planned in collaboration with the Faculty of Arts and Humanities, although it was delivered by the Faculty of Technology. A total of 23 educational videos discussing the content of the different topics and activities of the course were produced. They are openly available at the following URL: https://vimeo.com/channels/ 1283957.

The course comprised three modules and one final project. The modules were:

1) Major concepts of programming;
2) Python on text; and,
3) Python on rich media.

Four individual assignments corresponding to 10 ECTS points, and a final project equivalent to 5 ECTS were connected to the different topics of the course. Individual student assignments included: 1) aspects related to programming, and 2) reflections about the learning process and decisions taken while working with the code. The final projects (done both individually and in pairs) shared a number of elements, but the student could choose the specific area of interest and had to write the specific project proposal for approval by the teacher.

Of the 40 accepted students, 28 registered for the course and were active from the first day. They came from nine countries: Denmark, France, Germany, Italy, Moldova, the United Kingdom, Sweden, and Switzerland. The heterogeneity was reflected in their education level, which ranged from recent BA graduates to full professors, and in disciplinary diversity. On the forum they listed the following subjects of interest: education in linguistics, cognitive science, archaeology, book history, HR analytics, economics, NAO robotics, visual communication design, library profession, museology, cultural analytics, library and information science, book publishing, religion, philology, medieval history, digital public history, English literature, computer science, media technology, digital editions, and political science. Their expectations included: acquiring general programming skills, programming applications in DH research, applications in cognitive research, data analysis, data visualization, data curation, programming for use in statistics and visualization tools, programming skills to be applied to computational linguistics, employee database management, and learning Python (a few already knew C++, Java, but not this specific language).

The survey focused on two objectives: 1) what worked well, and 2) what could be improved. Of the total of 22 respondents, nine students had completed the course by this point. Seven wrote that they dropped out because of the lack of time (e.g., working 100% and taking the course at 50% is a lot of effort) and two because they had problems with the course (three did not reply to this specific question).

The students were generally satisfied with the teaching materials, videos, assignments, and the final project. Most students liked the knowledge, responsiveness, and friendliness of the teachers.

Proposals given by the students to improve the course include:

A. Content-wise:

• Provide brief pods on why programming is important for different humanities disciplines with examples, to provide context to the course;

• Create a list of resources with free tutorials;

• Work with data also from other sources like Twitter and other social media;

• Add a few more very short assignments (30-40 lines), although most students thought there was enough work already;

• Focus only on text processing to include advanced methods like regular expressions and address rich media and visualisation in their own course; and,

• Add web scraping as a common method to work in DH today (although this is not core programming).

B. Administrative aspects:

• Provide assignment descriptions and deadlines for all tasks in the course at the start of the course (this was hard to do since given first time);

• Introduce more live video meetings and Q&A sessions;

• Encourage students to do one tutorial online and read the textbook before the course starts;

• Provide a ready design of final project if no own data / challenge;

• Provide quicker feedback to assignments (since the course was given for the first time, there were some challenges in creating a smooth workflow together with other tasks of the teachers involved);

• When providing feedback with assignments, provide also a sample code for an 'ideal solution' and explain in more detail how the code could be improved (beyond 'poor code');

• Provide more support for finding a partner with whom to do a final project; and,

• When explaining on fora, provide examples of code, rather than point to a resource online, since the latter may be too complex for the students first encountering programming.

Initial results were presented at a workshop on DH education in order to seek further feedback.[35] Major further input referred to the fact that programming is mostly taught in pairs. One approach for the future would therefore be to encourage pair-wise working, such as reviewing each other's work on an existing collaborative programming platform such as repl.it

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[35] Koraljka Golub, and Marcel Milrad, "Programming for Digital Humanities: Experiences from a Master Course," in *Higher Education Programs in Digital Humanities: Challenges and Perspectives*, workshop at the 3rd Digital Humanities in Nordic Countries conference, Helsinki, 7-9 March, 2018, accessed May 28 2018, https://lnu.se/contentassets/174ebd1aa4034b8faddbcac0f8d66935/golubmil rad.pptx.

(https://repl.it/). In addition, programming concepts and computational thinking skills could be taught separately from the language (in our case Python), so we could split the 15 ECTS course into a first 7.5 ECTS course introducing programming concepts and computational thinking, whereas the second 7.5 ECTS course would focus on programming with Python.

Discussion

Based on exploratory research conducted using all of the methods described above, this section describes different aspects of the planned DH Master's programme.

Prospective Students to Enrol in the Master's Program

The programme and individual courses are of interest to students from a vast range of backgrounds. A number of target groups ranked according to importance in terms of number of potential students are:

1. BA graduates of humanities programmes at LNU and beyond, looking for a Master's degree with a strong focus on IT, highly desirable on the job market;
2. GLAM (Galleries, Archives, Libraries, Museums) and other professionals looking for an update of their IT skills;
3. Elementary and high-school teachers who wish to learn about digital methods and digital transformation of society; and,
4. IT staff of various kinds, e.g. who are between jobs and are looking for career readjustment and continuous education.

Based on discussions with relevant stakeholders, a big problem in the GLAM and cultural heritage sector is exactly the lack of DH-knowledgeable team members. Either they know IT and find it hard to understand the application context, or vice versa. Furthermore, there is a difficult job market for humanities people, but technical skills are highly appreciated whenever people have them, which humanities graduates normally do not.

One may also foresee that, perhaps, a number of new types of jobs to be offered in the coming decade are yet to be created. A unique knowledge of understanding the humanities, the technical, and the bridge between them, may be highly relevant. Even school systems will be facing the same problems when teaching art and humanities, and social sciences topics. Some concrete predictable examples for the presence include: designing online services, including cloud-based services; data management; metadata expertise; a range of digitisation-related expertise; and provision

of consulting expertise with regard to the design and deployment of future information spaces. Not the least important is academic research careers in the humanities or related fields, including in one of many DH centres in Sweden and abroad.

According to interest rates for the pilot course in DH, *Programming for Digital Humanities*, run in 2017, there were close to 100 applicants with a range of backgrounds (see previous section). Based on those initial indications, with information marketing strategy and dissemination through Digital Humanities in Nordic Countries (DHN) and DARIAH networks, through our Chinese office, we believe that it will be possible to have 40 applicants as a foundation for filling out the 20 places we would like to offer for the students applying to the programme, (e.g., five Swedish, five-ten EU, five global of whom one-two would be global non-EU students. In addition, we would select a few independent courses to make them open to non-programme students, and link them to related programmes (e.g., in digital learning, data science, computational social sciences, etc.), in order to sustain the whole programme.

Niche for DH Master's at LNU

In Sweden, the University of Gothenburg is the only other university with a Master's programme in Digital Humanities, which started in the Fall of 2017. Unlike the DH Master's at LNU, their programme is conducted in Swedish, and runs as a campus mode only (full-time, two-year). Also, they focus on textual scholarship; on the one hand, digitization and scholarly editing and, on the other, quantitative approaches such as topic modelling and other forms of text mining. Of the remaining Nordic countries, there is a 60-ECTS minor at the University of Helsinki, which is a campus-based programme in the Finnish language. In Europe, a large ratio of European programmes seems to be campus-based; also, a number of EU programmes are 60-ECTS in scope.

There is a need for collaborative efforts to understand the challenges and possibilities in DH. Therefore, involving colleagues from a range of disciplines as teachers, as well as from non-academic institutions is crucial. The latter would be achieved through, for example, educating for skills that are often missing in the market for job skills of humanities professionals (e.g., digital storytelling, digital interfaces for different groups of end users), as well as organizing students' theses work on actual projects that need addressing in the non-academic sector. In addition, building on the international staff profile and their connections, would result in wider

collaboration with external academic institutions, which would further add to the expertise pool.

However, differences in approaches by the different disciplines and sectors may present further challenges. While they all belong to DH, the challenge we would need to address is to find the overlap which is the core of the field at LNU, what is the whole picture, and how to combine the different 'Lego' pieces. Furthermore, while there is a strong collaborative spirit across the whole of LNU, there will be administrative issues with cross-faculty and cross-university collaboration, as the current working structures are based on individual units. Related to this, agreements will need to be reached as to with what, and how, each department and staff member would contribute.

Sustainability of the Programme

A combination of cross-disciplinary, cross-sector and international aspects provide a good potential to build a solid DH Master's programme which would equip graduates with the knowledge and skills to address present and future challenges related to DH. However, there is a relatively low number of students who pursue carriers in humanities at the Master's level in Sweden – for most jobs in humanities, employers tend to accept Bachelor-level degrees. Further, LNU is a young university and one question is whether it can attract enough students for a return on investment. Therefore, other opportunities include an attractive mixture of compulsory and facultative courses at graduate level, as well as in the international online mode which would attract a larger number of graduate international students; the latter also being in line with LNU's internationalisation strategy for the future.[36] In addition, offering courses as individual, free-standing courses for, e.g., already working professionals who need to brush up on certain digital skills, may further increase the sustainability of the programme.

Implementation

Operational aspects

Discussions regarding how to implement the DH Master's administratively have taken place within the DH Master's Board, and in consultation with the Head and Deputy Head of the Education Board of the Faculty of Arts

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[36] https://lnu.se/globalassets/lnu_internationaliseringspolicy_eng.pdf, accessed May 28 2018.

and Humanities. A major point to decide on was whether a new subject of study should be introduced, or if a DH Master's could be held as part of, for example, the existing Library and Information Science discipline. Since DH is a well-established research field, and in order to promote democratic, collaborative design and implementation of the DH Master's, the decision was made to establish digital humanities as a new area of study.

The following point was whether the ownership of the DH Master's could be held at a level above an individual department, e.g., the iInstitute mentioned previously would be a good candidate. However, based on related experiences, it was decided that the most sustainable, practical, and fastest, way to implement the DH Master's is to anchor it to an existing department, and at the same time, establish collaboration with other departments and faculties who would act as owners of courses given by them. A contract will be signed between the participating faculties and departments, following the model of the e-Health programme (see above). While DH operates as an interdisciplinary field of research, humanities seemed to be an appropriate home for digital humanities as a new subject of study at Linnaeus University, thereby complementing research by the Data Intensive Digital Humanities Research Group of DISA. This follows from the fact that major DH foci lie in addressing questions from the humanities using computational methods, at the same time applying humanities techniques to study digital cultures, tools and concepts. This choice is also in line with the majority of universities with degrees in digital humanities being awarded as Bachelor / Master of Arts, rather than Bachelor / Master of Science.

Within the Faculty of Arts and Humanities at LNU, most discussions related to the DH Master's have taken place within the Department of Cultural Sciences, with many DH researchers. Therefore, this department was chosen to host this proposed Master's. The main programme coordinator is to be from the Faculty of Arts and Humanities, and the deputy programme coordinator from the Faculty of Technology. They will be jointly responsible for the administration and development of the programme, and for contacts with students. The programme board consists of the main programme coordinator (chair), deputy programme coordinator, course coordinators, student representatives, and an external member.

Stability-wise, a significant number of the teaching staff for the DH Master's are employed on permanent contracts as professors and senior lecturers, which vouches for stability in courses and in the competence required for teaching in the discipline. The predicted expansion in terms of members and the work to be conducted within the iInstitute, will further secure the high quality of teaching.

The programme is to be organised as an international campus and online programme consisting of 120 ECTS points. The envisioned plan is to start by offering it at a 100% pace over a period of two years, and, depending on the need, add an option to study part-time. The latter may particularly be of interest to working professionals. For this group of potential students, a 60 ECTS points *magister* programme (Swedish intermediate degree between a Bachelor's and a Master's degree) could be offered. In addition, individual courses will be offered in the self-standing mode for those who wish to take them outside the full programme; this would also help support sustainability of the programme.

Visions and Perspectives

The programme is envisioned to impart the knowledge and skills needed for a contemporary professional or scholar in the humanities today. Theoretical aspects and critical perspectives regarding the potential and challenges ensuing from digital transformation of the humanities disciplines, as well as society as a whole, are addressed. At the same time, the programme provides a strong component for acquiring practical skills in addressing humanities research issues using digital methods. The student is trained to contextualise, analyse, and interpret, dominant and emerging digital methods used to address a wide range of challenges in the cultural heritage sector, the arts and humanities, and related disciplines. Empirical deepening takes place during all courses, both at general levels in obligatory courses, as well as a number of electives designed to suit students' specialised interests and educational background. The programme improves students' ability to use subject-specific and general digital humanities, social sciences and technologies, as well as to exercise their ability to understand, compare, and evaluate, different theoretical traditions and emerging approaches, to address current and future problems in the field. Using problem statements and theories derived from arts and humanities, as well as social sciences (many of them now transformed, and newly emerging, as a result of digital transformations), the students are trained to produce new knowledge and solutions reaching out also to information and computer sciences and related disciplines.

The programme emphasises the current and future role of cultural institutions' social significance and usefulness in the digital age. The purpose of the programme is to equip students with knowledge and skills to work in interdisciplinary teams which are able to jointly address complex societal challenges within their future working spaces. Many existing humanities and social sciences undergraduate degrees seem to lack the

digital methods component, or critical perspectives of digital developments in the professional, research, individual, and collective fields.

Undergraduate education in a number of humanities disciplines seems to be insufficiently marked by interdisciplinary perspectives which are needed to address the complex societal issues arising. This programme will allow students to learn about digital methods and humanities, and to do so collaboratively, in teams composed of members from differing disciplinary backgrounds. Furthermore, a strong focus on addressing existing problems through these projects will help support this further.

The combination of the theoretical, critical, and practical, equips graduates with the abilities to work in interdisciplinary teams in their future working places, thus jointly addressing complex societal challenges of the future. The programme prepares students for current and future jobs offered across public and private sectors. Additionally, the programme provides the foundation for doctoral studies in the humanities and related disciplines. The degree is awarded in the field of Digital Humanities.

We will strive to ensure that all the content of the courses will be research-based teaching: topics to be taught will be connected to ongoing challenges in existing research projects. The teachers on the programme are all researchers active in a range of DH subfields. Together with an external sector representative, they will also lead the student through their Master's thesis.

Courses listed in the programme syllabus either exist already, or are suggested by future course coordinators, who will be able to teach the courses from the start of the programme. All elective courses give ample choices for students to design their individual study profile. Teachers in the programme have high scientific and pedagogical competence. They are professors, senior lecturers, and researchers. Teachers are merited pedagogically as lecturers, supervisors, and course examiners.

Ideally, we would hire a full-time Professor in Digital Humanities and one or two post-Docs to create the foundation for the future, and at least two PhD students who would research in DH and do 20% of teaching in the programme. Also, resources to cover the fees of external renowned experts in DH to give guest lectures at least on core courses are needed: in the 7.5 Introduction to Digital Humanities course, a number of subfields of DH would best be presented by renowned experts.

Because of the immense transforming effects of digital on many areas of human life, the DH field engages in constant discussions of challenges and (dis)advantages of this digital transformation. The courses and literature provided in the curricula invite critical examination of the different aspects connected to DH phenomena.

DH has a strong collaborative component with external sectors: libraries, archives, museums, and galleries (GLAM) are common key players in DH research and development. In collaboration with these actors, particularly through this course, each student will have the opportunity to address the direct needs of these institutions, in turn serving the general public. Invited professionals from the GLAM sector will contribute to research-based teaching by bringing in authentic challenges from the field.

The requirements to join the programme are for the candidate to have a Bachelor's degree in any previous humanities subject area, or related (e.g., Bachelor of Arts in any social sciences discipline, or Bachelor of Science in information, informatics, computer sciences, or related), of at least 180 ECTS points. While primarily, students with a humanities degree are expected to be the main target group, students with social sciences and technical backgrounds will also be accepted. This is in order to support interdisciplinary working cultures typical of DH research and the profession. Another requirement will be English course 6 from a Swedish upper secondary school, or its equivalent, in line with LNU's admission requirements for international students. The application will need to be accompanied by a mandatory letter of intent to be used as a ranking tool.

For the campus programme, we would suggest accepting 20 students per year. For the online programme, considering common drop-out rates of 50% in online courses, we would propose accepting 40 students, aiming at 20 completing the programme. This would be complemented by a larger number of students taking selected individual courses.

The General Master's of Arts in Digital Humanities degree will be awarded. Also offered is a specialised Master's of Arts in Digital Humanities–Library and Information Science for students with a Bachelor degree in Library in Information Science, who choose a block of 30 ECTS in Library and Information Science electives and a thesis focused on the Library and Information Science subfield of Digital Humanities. Other specialisations following this model may be offered, too.

When it comes to opportunities for further studies after completion of the examination in the main subject of study, since DH involves all humanities, the knowledge gained should allow the student to proceed with PhD education in any humanities discipline, after acquiring the MA degree in Digital Humanities. This is particularly enabled by the second part of 60 ECTS, which are to be acquired based on the student's interest (30 ECTS in electives and 30 ECTS in the Master's thesis, where the topic can be freely chosen). This, in theory, enables PhD studies in Engineering, too, since a large number of points can be derived from engineering courses (in order to join LNU's PhD programme in Computer and Information Science a

candidate should have at least 90 ECTS in IT/Information related topics), as well as computational social sciences, depending on the courses chosen.

Contents

Syllabus-wise, the programme is envisioned to have three main modules related to:

1. DH theoretical foundations and impact;
2. DH methods, design and deployment; and,
3. Application domains and evaluation.

It is divided into compulsory and elective courses. All compulsory courses belong to the programme's main subject of study. The programme consists of 60 ECTS in obligatory, core courses in the field of Digital Humanities. This is followed by 30 ECTS in electives and 30 ECTS for the Master's thesis.

Obligatory courses (60 ECTS + 30 ECTS Thesis Course) are proposed in the following sequence:

- Introduction to Digital Humanities, 7.5 ECTS.
- Digital Humanities Research Methods, 7.5 ECTS.
- Critical Theory and Digital Transformation, 7.5 ECTS.
- Programming for Digital Humanities (may be re-formulated into Programming for Non-Programmers to attract students from other programmes), 7.5 ECTS.
- Linked Data and Information Structures, 7.5 ECTS.
- Networked Society and Internet Cultures, 7.5 ECTS.
- Advanced Topics in Programming, 7.5 ECTS.
- Management of Cultural Heritage, 7.5 ECTS.

(Sequence-wise, a block of 30 ECTS in electives follows here).

- Master's thesis, 30 ECTS.

Elective courses (30 ECTS) proposed to be given by LNU include a combination of current courses from other programmes, existing courses adopted to aims of the DH programmes, and a number of new courses. These are organized below based on which faculty gives the course. For specialisation *MA in Digital Humanities–Library and Information Science*, 30 ECTS need to be taken from courses marked as *LIS (Library and Information Science). Each elective in the list below amounts to 7.5 ECTS credits.

From the Faculty of the Arts and Humanities:

- Digitisation of Cultural Heritage
- Metadata for the Humanities
- Cultural Heritage Information Access and Management
- (Research) Data Management
- Digital Humanities and Critical Theory: Advanced Topics
- Information Ethics, Politics and Policies in the Digital World
- Digital Heritage and Museum Documentation and Communication
- Digital Media and Methods for Sampling and Analysis
- Film, Archive, and Digital Culture
- Film as a Research Tool
- Historical Perspectives of Digital Transformation
- Digital Translation
- Linguistic Perspectives of Language and Text Data.

From the Faculty of Technology:

- Information Visualisation
- Social Media Ecosystems
- Interactive Technologies for Digital Humanities
- Web Development and Deployment
- Data Mining
- Statistical Data Analysis with R

From the Faculty of Social Sciences:

- Quantitative methods in Social Sciences
- Quantitative methods II
- Social network analysis
- Modelling and Social Simulation.

From the School of Business and Economics:

- Cultural Consumption and Business Models.

The electives are envisioned to provide maximum flexibility for the student. Therefore, they can be taken at any other university providing courses in the DH field. These will include summer courses, like those given at the University of Aarhus, and summer schools which provide credits, such as the one organized by the iInstitute at LNU. For this purpose, a listing

will be made available as part of the programme; for an initial one, see below.

Other universities:

- Premodern Texts: Digital Tools, Methods and Resources (Lund University).

Concluding Remarks

In this work, we have described our approach to conceptualizing and developing a new Master's programme in DH. We have been working systemically in order to establish a programme that can fit the requirements and address future societal challenges in the field of humanities, having in mind the digitalization pace of our society. The approach we have taken focuses on bringing together different disciplines from distinct faculties. In this way we are not just complementing each other's knowledge and expertise, but also paving new ways for addressing crucial challenges in the field that can be solved only by working in a cross-disciplinary manner.

In terms of practical aspects, issues related to marketing strategies, international collaboration, and collaboration with external sectors, require further exploration. Another challenge relates to how to create dynamic and flexible ways for students to combine different courses in ways which would fit their different expertise and specialization.

A mentioned earlier, the recent establishment of the iInstitute, an iSchool at LNU, will serve as a launching platform to put forward the DH Master's as a key part of its endeavours. The iInstitute aims to build a number of new programmes at LNU, all of them following the DH master model. This model sets out to address societal challenges through its cross-sector, cross-discipline, cross-university and international collaboration, reflecting the values of LNU's vision and strategy 2015-2020. In addition, through bringing together different disciplinary, sectoral, and international backgrounds, it also provides a good foundation for creating strong research environments. Considering these aspects, the DH Master's programme could set example for others in terms of mode of operation and pedagogical approach.

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Appendix 1. Email survey

1. What kind of knowledge and skills would be most important to include in the programme? In particular, what kind of technical skills/knowledge are needed on and what kind of humanities skills/knowledge?
2. What would be requirements to start the programme? A bachelor degree in at least one of the humanities disciplines? A bachelor degree in a technical discipline related to, e.g., computer science?
3. What kind of jobs / working tasks should our graduates be able to take on?
4. For whom would this master programme be particularly interesting?
5. What does the job market look like in Digital Humanities today in your country?
6. What would be the best way to engage non-academic partners in the programme?
7. Would you be aware of any bachelor/master programme digital humanities taking place in your country or at your university? If so, would you be able to provide a link to its description or attach a document containing the description?
8. Based on your knowledge of the Digital Humanities Initiative at LNU, what would be unique aspects of the Digital Humanities Programme that LNU could provide?
9. Would you and/or your institution be interested in taking part in collaborating on the programme in some way (e.g., teaching, joint student projects, student exchange, etc.)?
10. Any other comments would be most welcome.