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FACULTY OF HISTORY AND PHILOSOPHY
DOCTORAL SCHOOL OF PHILOSOPHY**

**PAPER WATERMARKS IN TRANSYLVANIA
XIV-XV CENTURY
PH.D. THESIS SUMMARY**

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KEY WORDS

The study of watermarks

Watermarks

Watermarks repertoire

Paper

The history of paper

This doctoral approach started with the idea of establishing an instrument of filigranologic content. The impulse was partially offered by implementing the *Bernstein- The memory of paper* project whose stated goal was the establishment of a portal giving access to graphical representations of watermarks made from paper used to support the underlying writing no matter its origin or place of provenience. From this perspective, the filigranologic repertory resulted from this doctoral demarch represents a novelty through the research of watermarks and its various graphic forms coming from the medieval papers production used by the issuers of Transylvania. Also, the filigranologic repertoire could be considered as an addendum to the work published by Alexandru Mareş with the title “*The Romanian Paper Watermarks of the sixteenth century*” whereas it contains paper watermarks used in the immediate eve of the sixteenth century. Moreover, by the working methodology and the standards applied to the filigranologic repertoire may be a source compatible and implemented as a database with imposed standards within the aforementioned project. Such an approach would allow other institutions in our country to join those who already are contributing to the development of the Bernstein- “*The Memory of a Paper*” and today reached thirty-one providers of information in over thirteen countries. The representations of over 600 watermarks included in the filigranologic repertoire were created based on the standards issued by *IPH - International Paper Historians*.

Introduction

The introductory part of the doctoral thesis is trying to trace the research environment in general and the falling action. It is presented the researches on the history of the paper, the limits that marked the research of the previous period, the steps taken on an international background and the role that interdisciplinarity played in setting new benchmarks for researchers and historians. The development of the digital capacities represents the incentive which relaunched the research on the underlying material, in this case writing paper. Computer approach has allowed new way of communication between disciplines interested in the history of paper offering a host of facilities. Research institutes predicted the advantages provided by these new capacities and have taken the necessary steps in adapting to the new requirements and to be able to manifest within the framework offered by *IPH - International Paper Historians*. A significant development have been noted in the filigranologic approaches which acceded to the idea to create a general repertory of

paper watermarks. These were the preconditions that led to the birth of *Bernstein- “The memory of paper”* project and took as its starting point the results of those who are considered to be the parents of the study of watermarks namely, Charles Moise Briquet (C.M.Briquet in continuation of this summary) and Gerhard Piccard. The project proposed and managed to create a portal or a gateway to databases that already contained reproductions in digital form watermark picked by the two great researchers of watermarks encountered in the digital environment named Wasserzeichen-Informationssystem – Piccard Online and Briquet Online **.(aici ai un footnote)** The permission granted to the portal to access database owned by different institutes did not affect in any way their rights over the held material.

There were immediate new institutes of research interested in the studies of watermarks and offered their availability and informations held. Bringing together more database with digital information and storing them in different forms soon raised new questions of governance. The need to establish a new rule for intercommunication and to establish standards to align research results, targets imposed by the new informational requirements. They managed to establish a ranking system of graphic representations of watermarks by ending endless discussions conducted over decades and also establish a minimum set of metadata for each watermark. This led to some standardization that are the basis of research conducted in this doctoral work.

The watermarks identified in the documents were collected, reproduced and accompanied by metadata required for the plan mentioned above. In this way, the results obtained from the researches are consistent and compliant to the new standardization. Along with the watermark repertory and based on it, some conclusions have the sketched regarding the stages of penetration and the use of the paper on transylvanian land. It has been identified the areas from which the paper came, trade routes through which they reached Transylvania and and its usage among the categories of issuers.

Because the studies over watermarks were marked by different approaches and the used terminology throughout time has seen a number of changes, it have been preserved or used parallel differences in terminology. These differences occur mainly between the terminology used in Anglo-Saxon spaces and Latin. The term *watermark* and *filigran* are used also today in parallel in order to mention the consequences left by the sieve used to manufacture manual papers.

Chapter I

This first chapter has as central subject the institution and sources of where the researched documents came, the way in which they were organized and their problems regarding accessibility to documentary material.

The general presentation of archives brings to our attention a short history of trying to create a retrospective on the institution of archives as the primary holder of retained documents, created in the Middle Ages. The way in which the institution was founded, the important data that influenced the evolution and development of the institution, personalities, legislation which marked the objectives and work of the institution of archives in our country. Sources of information and documentation are those that have been founded by archivists and archive specialists. There are mentioned the stages through which the structural parts of the institution have been created, especially those in Transylvania.

The information approached from the National Archives is a subchapter which was dedicated to the project named “Integrated IT system for managing the service offered to the clients of the National Archive” implemented by the institution of archives in our country since 2013. One of the main achievements of this project is to purchase the software giving informations of archives know as “SCOPE - ARCHIVE”, a specialized program in records and archives management. In fact, this represents an instrument of evidence through which it can be accessed, queried, filtered informations related to archival documents kept in storage units of the institution of archives. Each record can describe an archive document both physically and intellectually. Search engines allow retrieval of information by any existing value and recorded as metadata. Moreover, it can be created links between different records based on various criteria or with other objects found in digital form as image files. The description of this software intends to exemplify the way in which the institution of archives can use the results of this doctoral research by accepting image files that represents the watermark and also by attaching them to already existing records. In this way, the researcher can search and find an archive with search tools, can access the image of the document and also the image of constituents such as seals, watermarks, etc.

A presentation of the archives located in Cluj County includes a local description for the Nation Archives Service (further mentioned in the research as SJAN Cluj) from the perspective of the largest holder of medieval documents in our country. There is a brief history of how the archive documents, especially the medieval ones, arrived in the deposits

of the service district, and a short history of institutions, personalities engaged in the collection, storage and organization of archival material pegged by time stamps through which the legislation or some historical events marked the way through which the documents arrived in those archive deposits.

Fonds that contain medieval material refers to those materials on which this research was oriented and which are located in the administration and kept in the archive institution in Cluj. It is presented from the point of view of their organisation, tools of evidence and instruments of information and access. There are present lists of collections and archival funds containing materials of medieval production of archive funds and extreme years of contained documents. Problems of access to archival material has caused some dedicated research to be allocated drawing up a new record, more comprehensive, enabling the creation of an overview of the documents, which made it necessary to call for external information sources. Starting from an external database of the institution containing information on the underlying material and issuer of the document, it was managed a selection of the documents which belonged to the local issuers and over which it was focused the research. There is also the comparative situation between the initial evidence obtained from the hungarian archival institution and the archival documents already existing in the institution of Cluj by SJAN Cluj. Attached to the doctoral thesis is a list of archival documents which contain watermarks and have been ordered in a chronological order (see *List of documents with watermarks*).

Chapter II

This chapter is focusing on the itinerary of paper, from the moment of its discovery to its penetration and usage in Europe.

The history of paper, the watermark, the economical and cultural significance of their study in the medieval history of Transylvania context but also an analysis on issuers and ecclesiastical documents from local government in Transylvanian area. The emerge of paper, presented in parallel with underlying writing materials, meant a turning point in human evolution. Ever since the early use of paper was realised, the important value that it represented, fact that was present in the attempt of the old China to preserve its monopoly over the paper making technology. Through the Arab world paper reaches Europe where, even though accompanied by some prejudice, will gradually impose in the usage of the chancelleries. European wetter climate caused some changes both in the way

of making paper and its composition in the idea of printing with increased resistance. Watermark arose from the desire to mark differences in quality and to identify the manufacturer. Marking on a map the location from where the paper bearing watermark was used could lead to conclusions concerning some aspects of life during those times in an economic, political and cultural plan. Such representations can be found in this research also used particularly to distinguish the geographical space in which it spread a specific paper production.

Issuers of documents in the Transylvanian area may subsume all those who have expressed in written form in that specific period of time in which the subject of research was made. For time reasons and also workload the non-Transylvanian issuers that have issued documents in their passage through the Transylvanian area were excluded so that the collected watermarks came only from the issuers and local chancelleries, both ecclesiastical and secular. Observations revealed a diversity of documents which reflect a structure of the society both patchy and uneven.

Awareness of the values of a written document reinforced with authentic seals represented an increasing requirement of social development. Through its representatives, the church was involved and was part of the majority parts that managed a society, securing itself a major social survey favored through its ownership as an issuer of documents. The most intense activity regarding this were owned by the confirmation places (*loca credibilia*) where canons highlighted the sheer volume of documents issued. Between the documents of the ecclesiastical issuers we will rediscover watermarks from the paper used at the Convent (benedictin) Cluj-Mănăştur, Capitol (episcopal) Alba-Iulia but also from the Convent of Orăzii Hill.

At the very beginning of the administrative organisation, when necessity required drawing paperwork and documents, they were calling on the church members, custom taken also by local administrations of institutions. The spread in the secular world of literacy and of writing allowed governors on duty to appeal to people at hand or to trustworthy people in order to issue documents. The first attempts to organize these personal services brought to the governor had as a model the Western chancelleries and especially the royal one. The notion of personal chancery during the period in which laid the foundation office, refers to a person or a few people that were responsible to draw the documents.

The documentary production coming from the chancellery of the voivode is largely a part of the result of gatherings of states or it is closely related to them. In the compiled statistics the voivode appears as one of the most important of the issuers of documents from the

medieval period. Reflected in the number of documents and proportional with the watermarks detected, the hierarchy consisting the number of issued documents outlines the second category of issuers which are the voivodes followed by counties, fairs and cities.

The existence of the chancellery is an administrative characteristic seen through the activities of supplying the documents. The emerge and the way of organising of the chancellery does not have a definite starting point but from the very beginning of its existence it could hardly have been attributed such a qualification. The notion of personal chancery during the period in which it was laid the foundation of the office, refers to a person or a few people who were responsible for drawing up the documents. Given the importance of this new body in documentary, this Ph.D. work includes a description of it from an organizational point of view, of existing functions and the existing relations between them.

Chapter III

This chapter is the most comprehensive and overtakes the entire aspect of collecting, processing and presenting the watermarks found in the researched documents. To highlight the innovative parts in the applied technique and the workload performed, there are subchapters that include the description of methods through which the watermarks were collected which were used by experts of watermark science, up to the start of the doctoral thesis as well as the most prominent representatives of the study of watermarks. Another subchapter is dedicated to notable achievements in the study of watermarks in terms of the use of information through technology.

The procedures of work and the equipment used shows the situation at the very beginning of research and the approach used. Difficulties in the organisation of the documentary materials and the access to them, caused the emerge of new activities unexpected in the original research plan. As a result, it has been established a new research plan divided into four stages. The first stage was dedicated to identify the documentary material that was under investigation. This doctoral research focuses on the medieval material found in storage at Cluj SJAN, however, a part of these documents although kept in the records of the institution, are kept at BTU Cluj. This fact did not mean a decline in the economy of the practical approach because at BCU Cluj the instruments of evidence covers the entire medieval material found in storage with very small deficiencies. Instead, at SJAN Cluj the existing filing system is very poor, insufficient and in some cases

nonexistent. The new instrument of evidence created in electronic format enabled filtering and querying data in a manner that could provide various statistical summaries.

The second stage includes the identification of documents in the archive storage and linking its existence with the tool of evidence newly created. Basically, it carried out a verification of content of each box and mention its existence in the work instrument created. Once detected the original document and recording the characteristic data made but also digitally collecting the watermark, thus reducing to minimum the physical interventions which could be harmful for the safety of these documents in the archive. In order to organise the digital material it was taken into account the existing work mode at the archive institution so that it ensured a compatibility with subsequent cooperation.

The third stage was dedicated to process digital images, collecting and recording metadata characteristic to the watermarks. The volume of identified and investigated documents exceed the number of 1600 archival units and documents, from which 8200 images have been removed, both documents and the watermarks included. These images refer to documents, watermarks and digital copies of watermarks. The results obtained exceed in volume those 671 watermarks from archived documents. In order for the results to be introduced in the paper as legible as possible and unaffected by the limited technical capabilities, it has been followed a series of digital processing. In this stage it has been experimenting a new method of determining the provenance of paper based on the density of the stripes and which, because of the limited amount of time and the necessary volume of work, led me to this part of research to be postponed for a longer period of time.

The last stage was allocated to interpret the collected data, forming its repertoire and drawing the scientific work. In the repertoire it have been included all watermarks identified in the research. To each watermark it has been given a number through which it has been given a reference. Within the repertoire the representations depict the watermark both in the form in which it has been collected and in monochrome copy. Other possibilities for analysis are annexes to the doctoral thesis where I presented only the monochrome copies. The way of organisation it is different to each given instrument, if the watermarks found in the repertoire are ordered based on the issuer in chronologic order, then the annexes presents watermarks depending on the model and in their choices and in chronological variants. Both the repertoire and tabular annexes were created in the idea of allowing researchers to approach them from different points of interest.

The investigated lot is kept in the archival institution in Cluj which is an important repository of the written historical heritage of the medieval area of Transylvania and

Romania. With a material rich in volume and also a content which represents a source of important information for both cultural and administrative history, economic history etc. with reference to the entire territory of Transylvania.

Among the domestic issuers, the richest documentary activity and also represented the best on the funds kept at SJAN Cluj, we can distinguish the administrative institutions and the the Benedictine convent of Cluj - Mănăştur.

Research undertaken in the first phase led to the identification of more than 4,200 documents, this figure refers only to the original documents that were issued prior to the year 1526. The documents were originally organized in over 30 archive funds. But the numerical estimation is approximate because of subsequent interventions by archival activities that have been performed on these funds and which laid on the idea of dislocating some documents from its original place of storage and incorporating them into newly created collections. To keep in mind that in the new collections the means to protect the documents have been kept, the possibility of restoring their origin existing.

From the totality of the identified documents of the medieval period it have been extracted only those documents belonging to local issuers. In this way, the volume of the documents subjected to investigation dropped to 2377 parts, number that includes both paper and parchment.

The collection technique of watermarks used in the conducted research represents a novelty through its chosen approach. Scientists who have done watermarks studies used as collecting techniques based on the technique procedures of those times and the available financial capabilities. Based on a sheet of paper and a pencil to carbon- 14 particles, the study of watermarks always sought to obtain as accurate reproductions as possible and free of obstacles contained by the sheet of paper. Initially, the expected collecting methods of watermarks were those by copying, pasting and shooting through transparency. The first ever tried method was the laminating method. The method was one incisive and it injured the document leaving traces on the paper. In many cases the consistency of the medieval paper did not allow the reliefs to stand out, the results ending up being very unsatisfactory. Copying using spreadsheets provided better results. In order for these representations to correspond exposure in a repertoire required a steady hand not to expose the inherent corrections and erasures occurred during the execution of the design. In this particular case the reproductions needed to be processed, cataloged, sorted and into a shape that would allow to be added in the research and typed. The procedure was applied in parallel with samples shooting through transparency. The improved outcomes and the reduced

execution time were the ones that led me to choose the method of working through transparency shooting using digital camera.

The next step was to process the watermarks. There were registered the exact dimensions of the watermark (width and height) and the distance between the calluses that employ the watermark. According to the methodology and protocol of processing watermarks developed by IPH it has been recorded the following metadata: n - the number of calluses; d - the exact size of calluses employing the watermark; I - horizontal distance between the extreme points of the watermark; h - vertical distance between the extreme points (parallel to the line calluses) of the watermark. The recorded values expressed in units of measurement (millimeter) were introduced in both instruments that were used, the created one and adopted one.

If through digital successive processing it was able to bring the image to the point where it can be observed all subsequent characteristics that have been transformed also in the content of the metadata, after listing the reproductions many of the observed elements in electronic form fade or even disappear. Further processing was more than necessary. The copying method ensured obtaining a black/white reproduction and removing the grievances appeared at listing. It is the moment in which it caused modifications in time economy allocated to this doctoral research. Manual creation with digital means of monochrome reproduction (black / white) assumed new artistic and technical skills.

In digital format, the copying method is identical as a procedure with the way in which the copying is made in the real world and in which it is used the spreadsheet which has a number of advantages. One of the advantages is the existence of the possibility to attach one or more digital layers, which through analogy would be equivalent to the spreadsheet used to copy watermarks and which do not affect the visibility of the object to be copied. These digital *layers* can be kept as separate files resulting in an exact copy in digital format. Another advantage is the ability to zoom in the main image to bigger dimensions so it can be registered elements, which at 1:1 size are illegible to the eye. All stages of this process can be recorded with a history of actions which can be taken from any point of it. The environment of the proceedings can be calibrated to the existing technical requirements.

A subchapter have been assigned to the deviations or errors that may occur in recording numerical values resulting from measurements or activities. The veracity of the interpretation of the collected data consists in the exact reproduction of the watermark. The comparative method, which takes into account two or more collected values as a result of

the measurement of the dimension of the watermark assumes the fact that the values are exact and it reflects reality. To check this aspect and to obtain a confirmation of the veracity of used data, I performed measurements on different existing repertoire reproductions made by others studying watermarks.

I started from the finding that those values resulting from measurements made on the watermark, directly on the original document are values that reflect a direct observation, so are the closest to reality. Most repertoires published to date shows reproductions of watermarks obtained by means of photocopying. This method of copying, like any other method which involves human intervention, may elude some aspects such as the line thickness of the stripes or of the wire from which it was made the mold of the watermark, the thickness left behind by the writing instrument (pencil, pen, etc.), the fidelity of the resulted copy, etc. The instruments that were used could also affect the results. The level of the measurements fidelity represents a special importance if we take into consideration the relatively reduced dimensions of the watermarks from the medieval period, the registered error of measurements units should be lower and not exceeding higher values than 1-2 millimeters.

Not to lead this interpretation of the dimension of watermarks to extreme, in order to evaluate the reproduction we should take into consideration this acceptable deviation, which may arise from the measurements of watermarks from original documents or after their reproductions.

Another error is the value of measurement recorded by some researchers and entered into the repertoires. There are cases in which the ones that collected the watermarks did not give the dimensions of the extremes but only to some components of the watermark. This is visible in the inscribed watermarks in a circle or cartridge where some authors have introduced in the repertoire the external dimensions of the circle or cartridge through which the watermark is subscribed, towards those who placed the extreme dimensions of the watermark model evading the geometrical form in which the watermark is employing. Starting with all these demonstrated, an investigation had been made in order to observe where the error may occur and deviations in the registered numerical values and which are the maximum limits through which we can place the resulted errors and also how much we can trust the values written in the repertoires and how much relevant are the comparative checks. Three of the four investigations address such errors found within watermark instruments. The fourth investigation deals with differences which may occur in registered sizes and come from registered documents that have undergone restoration actions.

International research, the main landmarks. Entering the main landmarks and international contributions was placed at the end of the chapter for reasons related to understanding and easier framing of the research undertaken in addressing international watermark study. It is marked the main watermark approaches made by European institutions and their results. Some of these achievements were actually adaptations, improvements and digitizing the results of famous people studying watermarks. The brand representative that marked the study of watermarks were given some pages through which we'll come across a short history, the main achievements and the results of their activity. Since the paradigm of the study of watermarks have experienced modifications with each approach or discovery, this research contains a chronology of those moments. It could not be omitted the contributions of the historians who focused on the paper used in Transylvania in the medieval period.

The glossary of the watermarks contains the abstracted image of those 671 watermarks identified and collected in this research paper. Initially, the glossary contained only images obtained through fotoshooting but, due to visibility difficulties arise from listing, it was necessary that each image to be further processed through the copying procedure in order for it to be consulted in a readable form. Each watermark is placed in a box made up of three parts, one containing the image collected by the shooting, one containing the watermark copy in monochrome and third containing data on characteristics of the document bearing the watermark. Some images collected by the shooting were modified again due to visibility difficulties so that it can be encountered images of shades of grey or blue (negative image, color inversion, saturation changes, contrast level changes). This processing method has been presented in the chapter as a applied working methodology. The watermark extracted from monochrome photographic image and given monochrome it is arranged in the second box and the applied method is described in the chapter as the methodology of work. Both images, the photo and the copy, are not given in their natural size (of 1:1) for page organizational reasons. The actual dimensions of the watermark resulted from measurements made are shown in the technical box.

Attached to the colour image and the black/white reproduction is the technique box. Its content has the role to describe technically the watermark but also to make the connection with the underlying material. The data are divided into three categories: archival reference, documentary reference and reference to the study of watermarks. The archival reference contains entries about the holding institution and the quotation system that the document bearing the watermark can be physically identified. The documentary reference provides

informations about the issuer of the document, the place and the date when the document was issued and, in some cases, the publication through which the document was edited. The reference regarding the study of watermarks contains informations regarding the classification, size and similar variants identified in the working tools used.

Regarding the way in which the watermarks were sorted, it was considered the issuer bearing the document. The main point of interest in this research being the watermarks of Transylvanian issuers and I wanted, by this arrangement, to create a visual model of the origin and the way in which the paper was used in medieval Transylvanian chancelleries. The seven categories under which was made the order are: voivod, vice-voivod, convent, capitulum (religion), county, town and others. By correlating the existing data in the glossary with data from the descriptive part of watermarks, we can make different point of views and provide a more general view of the way in which the paper was used by an issuer at a certain point or by location-time report.

The description of watermarks. As illuminating as it would be, a simple statement of reproductions of watermarks collected would not provide a satisfactory degree of accessibility and information necessary to form a legally approved point of view. A fact that can be seen in works with extensive content that have been published over the years. Until the creation of databases and specialized platforms, watermark reproductions have been made in the form of glossaries and edited albums. In general, the applied model in this research paper was taken from the studies of watermarks of C. M. Briquet. An add to the watermark repertoire is the descriptive part where it is handled aspects which are the main base of this research paper and where watermark models are analyzed. The correlation between the descriptive part and the part in which the watermarks are reproduced is based on a natural identification number.

Each watermark pattern is assigned a specific name reflecting its shape. On the lower hierarchical levels are organized versions of the watermark showing changes in shape or the same model of watermark accompanied by various graphic elements or additional reasons. Some aspects regarding the form of watermarks can be found in the repertoires and watermark albums edited through the visual method. Only in case of uncertain situations where the link between the name of the watermark and the form it determines is questionable, there are more particulars on the form.

The unit of measurement used to record extreme dimensions of the watermark is millimeter (mm). Just like in the case of the form, the dimensions of the watermark are inseparable to the reproductions in the repertoire. In most published works is not

mentioned the dimensions regarding the extreme points of watermarks because the representations are at 1:1 dimension, which can be deceitful because the reasons of editing and layout have made their dimension to modify. The need for additional mentions emerged with identifying similar variations, where similarities of form needed to be certified also with numerical values. These values can show the deviations given by the screen support, deviations which may have occur over time due to usage or attributable causes of the document holders. In the case of already existing watermarks found in large numbers and with similar variations, like the *Scale* or *Bull's Head* watermarks, the numerical values for width and height were not enough, researchers were forced to register new values like the width of tray or the distance between these. The numeric value have shown its need in the case of using electronic research method where, these values, allow actions such as filtering and interrogating in the database in which they are contained, searching and identifying various watermarks simplifying significantly.

The classification of watermarks in a coherent manner, which could offer possibilities like a hierarchical organization and also a continuous updating, raised many disputes. Among the first issues discussed was the different interpretation given by researchers to the form of the watermark. See, as for example, the watermark known as *Three Mountains*, where the significance of the form it is still discussed in specialized literature and the actual used term was adopted as a result of a general accepted explanation. In the cases of researches which contained few watermarks classification was not on the table but the in cases of repertoires containing many examples and rich in variants, their detection and referral to them was made in a cumbersome. The idea of classification based on specific designations and applied by M. C. Briquet represented the starting point in ierarhic determination based on keywords. But, the mere enumeration in alphabetic order of these does not simplify the identification procedure of watermarks. The next step was framing specific names or categories divided into groups depending on the significance of the watermarks. Today, there are eleven different categories: figures or anthropomorphic figures, fauna, fabulous creatures, flora, mountains or candles, facts, symbols or signs, geometrical shapes, shields, trademarks, letters and undefined shapes. Identifying the sought watermark can be done by starting with the category and down to the ierarhic scale of the watermark and subsequently to existing variants.

The descriptive part. The characteristics of each watermark were played in the descriptive part. Arranged alphabetically by specific names, each description is accompanied by one or more reproductions of the watermark. They are meant to illustrate

and make visual observations support of the description. Specific to each watermark, the description starts with its presentation, starting with its form and variants in the same form in which it was produced. It is mentioned the time in which it was used and the geographic locations of the cities where the document was released by its bearing issuer. Where the amount of information allowed, quantitative assessments were performed and proportionate in relation to other contemporary watermarks. In parallel, the same evaluation was presented to the watermarks found in the Transylvanian documents. The classification and hierarchical organization used is consistent with the work and sources consulted. The description of each watermark pattern begins with references to appendices and heading repertoire watermarks.

Conclusions.

The final chapter, divided into three subchapters, begins with a retrospective over the historical framework in which the researched material was created and kept. Based on the results obtained, both from the repertoire of watermarks and attached instruments that were created, are created hypothesis regarding the way in which the paper entered in the Transylvanian area, its commercialization and issuers of documents. Quantitative evaluations revealed customs of the time the activity of issuing documents or how the underlying material was used. Statistical statements presented in tabular or graphical form shows these proportions by units of time and allow an easy evaluation.

Documents issued in the XIII-th century had the parchment as an underlying material. The support was adequate as long as the activities on the issuance of documents were reduced quantitatively and most documents possessed legal value, value that raised in the consciousness of dignitaries and noble classes the importance of preserving the status and privileges through a written document. Next century brings new regulations and requirements regarding the written consignment activity afferent to the local freshly coagulated institutions. The secularization of knowledge of book and writing, the introduction of written procedure in the legal procedure, the emergence of specialized persons, the establishment of chancelleries with specific particularities, constituted the same amount of determining factors for increasing activities of issuing documents, these requiring increasing amounts of materials. The demanding market on parchment has been increasingly difficult to meet by the producers and the emerge of the paper in the first half the XIV-th century covered the need of it by allowing through the reliability of the

material its fast spread by its use so that in the second half of the century the paper to become the underlying material permanently in use.

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BCU Cluj-Napoca, fond arhivistic MIKE SÁNDOR

BCU Cluj-Napoca, fond arhivistic BÁNFFY

BCU Cluj-Napoca, fond arhivistic SENNYEY

BCU Cluj-Napoca, fond arhivistic WESSELÉNYI

BCU Cluj-Napoca, COLECȚIA GENERALĂ

BCU Cluj-Napoca, fond arhivistic KEMENY JÓZSÉF

SJAN Alba, fond familial Haller

SJAN Alba, fond arhivistic Parohia evanghelică C.A.Sebeș

SJAN Cluj, COLECȚIA DOCUMENTE MEDIEVALE, cuprinzând documente din fondurile arhivistice: fond familial BARCSAY; COLECȚIA MIKE SÁNDOR; fond familial TELEKI DE DUMBRĂVIOARA; fond familial MIKÓ RHÉDEY; fond familial JÓSIKA FIDEI COMISIONAR; fond familial HENTER; fond familial BÁLINTITT; fond familial BÁNFFY; fond familial BÉLDI; fond familial BETHLEN DE CRIȘ; fond familial BETHLEN DE IKTAR; fond familial BORNEMISZA DE KÁSZON; fond familial ESTERHÁZI; fond familial ESTERHÁZY ȘI MIKÓ; fond familial FRATER; fond familial GÁL DE HILIB; fond familial GYULAY KUUN; fond familial KEMÉNY ANNA; fond familial KEMÉNY PÁL; fond familial KOMÁROMY; fond familial KORDA; fond familial KORNIS; fond familial LÁZÁR DE MUREȘENI; fond familial NEMES; fond familial RETTEGI; fond familial SENNYEY; fond familial SOMBORY; fond familial SUKY; fond familial SZENTKERESZTY; fond familial SZEREDAI; fond familial TELEKI DIN LUNA DE JOS; fond familial TELEKI DE SATULUNG; fond familial TOLDALAGI; fond familial TOROCZKAY; fond familial VÉCSEY; fond familial DÉSI; fond familial SZENTIVÁNYI; fond familial BÖLÖNI; fond familial WESSELÉNYI; fond familial WASS;

SJAN Cluj, Colecția Generală
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