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ARCHIVAL SCIENCE AS AN INFORMATION SCIENCE

Abstract

The paper argues that archival science is the science of contextual transfer. Contextual transfer takes place when information is transferred from one place and point in time (context) to other places and points in time. Archival science examines this transfer: what makes information usable across contexts; what information should be transferred; how the information should be organized, managed, and preserved; what the transferred information is used for and what are the impacts that the information has for individuals and the society. This view to archival science connects it explicitly with other information sciences and opens possibilities for both the records profession and its research.

Keywords: *archival science, information science*

1. INTRODUCTION

It is often said that archival science was born when Dutch "Manual for the Arrangement and Description of Archives" was published in 1898 by S. Muller, J. A. Feith, R. Fruin. Until that time, archival science was an auxiliary science that was dependent on other sciences, but thanks to the manual, one understood that an archival fonds can be examined as such, as a whole that has its own internal laws, without any help from other sciences, like diplomatics, jurisprudence, and paleography. This made archival science an independent area of research and opened doors to its further development. The 1898 manual was

> "the first real effort to articulate systematically the concepts and methods that find their validity in archival theoretical ideas with internal consistency and logic, rather than in their historical, legal, or cultural context. Therefore... it must be considered the first scientific archival treatise." (Duranti, 1997).

So, what is archival science? Luciana Duranti (1997) equates it with professional knowledge and conceptions. For her archival science is "the body of knowledge about the nature and characteristics of archives and archival work" and archival theory "the whole of the ideas archivists hold about what archival material is." (Duranti, 1997.) Theo Thomassen (2001) says that the object of archival science is "process-bound information, which is to say: both the information itself and the processes that have generated and structured that information" and that aims of the science "are establishment and maintenance of archival quality" (Thomassen, 2001.) Robert Garon (here Couture & Ducharme, 2005) believes that the archival science has an object that sets it apart from related disciplines: recorded information.

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2. TRADITIONAL VIEW ON ARCHIVAL SCIENCE

These definitions are only examples of how we formulate archival science as a discipline. Generally, we think about it in terms of characteristics of archives and records. There is a strong connection to profession: a profession distinguishes itself from an occupation primarily by the underlying academic discipline; it is the specific body of knowledge that uniquely identifies the profession (Thomassen, 1999). Some writers, like Jozo Ivanović (2004), go even further and argue that archival science exists to separate the profession from the others. The role of archival theory and discourse is, according to Ivanović, to provide the archival profession with "moral foundation and formulation of archival credo, periodically confessed on congresses, conferences and in similar occasions" (Ivanović, 2004).

Theo Thomassen (1999) argues that the independence and autonomy of the archival profession and the archival science presuppose one another. Thomassen emphasizes the autonomy of archival science. By autonomy he means that archival science

> "...must be developed in academic freedom, it must not have the mere status of an auxiliary science and it must not be fully subservient to the archival institutions." (Thomassen, 1999.)

This fear of having "the mere status of auxiliary science" has historical roots. Line of defense against this threat are concepts. An independent science defines phenomena in its research area in its own terms. In archival science these terms include concepts like "records", "archives", and "principle of provenance".

Today the threat for archival science has changed. In my opinion, the biggest danger is no more that archival science would be demoted to an auxiliary science. Instead, the danger is that archival science is isolated from other sciences. Despite of its long historical roots archival science is a newcomer in academic world (Couture & Ducharme, 2005; Cunningham, 2005; Gilliland & McKemmish, 2004; McLeod & Hare, 2010; Tough & Moss, 2006) in which research is today often a collaborative process. To get partners – and funding – you need to communicate with other research areas. Artificial intelligence (AI) provides a good example: how can one develop applications of AI in archival science, if AI researchers are unable to understand what archival science is talking about?

My scientific world view is that a separate area of research exists regardless of the way we speak about it. In other words, concepts in social science and humanities are not mere social constructions or instruments used to discuss and interpret the world around us (Töttö, 2005): the concepts have a relationship to the reality going beyond what we observe, although we may find it hard to say what the relationship actually is. Therefore, I believe that we should be ready to formulate the area of archival science in terms that make it more open to other fields of research.

But how could one do this? Archives are a multifaceted phenomenon. There is an abundance of connections to other areas. Many issues in the society have a linkage to archives: legislation, accountability, work processes, information systems, information management, big data, privacy, information seeking and retrieval, research infrastructure, democracy, accountability, societal, organizational, and personal memory, knowledge organization, identity – all these give, among others, a perspective to archives and archival science. It is natural that archival science may be found in different scientific contexts. The most typical contexts are science of history and library and information science. Whatever the context is, it is reflected in the content of archival science (Bastian & Yakel, 2006; Yusof & Chell, 1998).

3. SCIENCE OF CONTEXTUAL TRANSFER

My personal background comes from the context of information studies (or library and information science, if you prefer that name). In my home university, Tampere University, Researchers and PhD students in archival science are part of a research group known as RIME – Research Group for Information and Media Practices. The RIME website states that the research group

> "...focuses on practices by which individuals, teams and organizations process information during its life cycle. The main activities constitutive of such practices include producing, seeking, use, sharing, management and organization of information." (https://www.uta.fi/sis/trim/groups/rime.html)

Thus, the question is, if this is the context for archival science, how could one formulate its focus so that archival science is integrated with other research areas without losing its distinctive character?

My suggestion is that this can done with the idea of "contextual transfer" that explicitly connects archival science with other information sciences. Contextual transfer takes place when information is transferred from one place and point in time (context) to other places and points in time in usable form. Archival science examines this transfer:

1. What information should be transferred (appraisal);
2. What makes contextual transfer successful (characteristics of records, metadata, description);
3. How the information should be created, organized and managed (planning of records management, design of information systems, knowledge organization, arrangement);
4. How the information is kept available across contexts (maintenance, preservation);
5. What are the rules governing transfer (legislation, ethics, best practices);
6. How the information is used and what are the impacts of the transfer for individuals, organizations, and the society (privacy, memory, identity, research).

I have previously (Henttonen, 2017) made a related, parallel argument: professionally records and archives management exists to transfer information in usable and understandable form across time and space (contexts). This idea repeats itself in different forms in records and archives management literature. For instance, in the life cycle model organization first uses records to support its work. Thereafter they are transferred to an archival institution to be used by new user groups in purposes for which the records were not initially created. While records continuum model, on the other hand, does not make a distinction between the active or semi-active phase of records (records management) and the historical phase (archives), it also states that records (and archives) serve several users and purposes in different contexts. Records continuum model shows how records and archives management consists of processes that make information available to ever larger user groups starting from the immediate neighborhood of information creation inside the organization and expanding from that to the whole organization and finally to the society at large. (For life cycle and records continuum models, see e.g. An, 2003.) A third example: Recordkeeping Metadata Working Meeting of the Dutch Archiefschool and Netherlands Institute for Archival Education and Research noted in year 2000 that recordkeeping metadata functions supports the transfer of records across domains and over time. Recordkeeping metadata was consequently defined as "structured or semi-structured information which enables the creation, management, and use of records through time and within and across domains in which they are created." (Hedstrom, 2000, 2001.) A parallel idea can be found in the Open Archival Infor-

mation System (OAIS) model. The model says that one should define a "designated community" and make decisions about metadata from the perspective of the needs of this community. The information is "alive when used and useful for the designated community; otherwise the information is just stored and therefore only data" (Nilsson, 2007, p. 17). Change of designated community may involve changes in metadata:

> For example, when the designated community changes from a particular scientific community to the general public, additional metadata may need to be added to the representation information and the preservation description information recordkeeping metadata and archival description to enable the general public to understand these resources. Even if the designated community remains the same, the evolution of the knowledge base of the community may also require the enhancement of metadata to keep the preserved resources understandable. (Niu, 2013.)

The idea of contextual transfer has corollaries both for the records profession and the archival science, but for both the change is more a repackaging of old ideas and way of looking them from a different perspective than actual reform in what is being done.

4. CONCLUSIONS

From the perspective of contextual transfer records professionals are – or they should be – specialists of this transfer and needs of the possible user communities. They should have understanding on what it entails to keep information usable in different future user scenarios and be able to combine this knowledge with the design of work processes in which this information is created, managed, and used. For the archival science, the change is that we should recognize the broad range of activities that we are looking at.

For both for the profession and the science the traditional approach has been to favor narrow focus and exclusive definitions. Thus, there are "records" and "non-records", "archives" and "collections", "electronic records management systems" and "business information systems", aso. Interest has been in that part of the dichotomy that clearly falls in accepted professional categories. Consequently, this approach has lead consciously or inadvertently – and at least in what is talked about (in contrast to what is actually done) – to leaving most of the digital information out of the scope, because it does not fall in these accepted professional categories.

This approach also limits research. Graig Gauld (2018) has written about lack of new ideas in archival science. He says that "the body of new, cutting-edge theoretical work that seeks to radically alter the outlook and practice of the archival profession has... thinned considerably in the last decade" and notes that with some exceptions

> ...if you were asked to name the archival theorists who first come to mind then you would most likely come up with something along the lines of Terry Cook, Verne Harris, Eric Ketelaar, Brien Brothman, Tom Nesmith, Frank Upward, Sue McKemmish, Jeanette Bastian and Randall Jimerson... It is not to do the names on this list a disservice, however, to state that these authors produced their main ideas, in some cases pioneering ideas for the profession, a number of years ago. (Gauld, 2018.)

The solution Gauld offers is going back to basics. He writes that

> ...our core professional tenets and competencies, those that have underpinned us since the days of the Manual of Archival Administration [published by Sir Hilary Jenkinson in 1922], have a place in the 21st century. We need to mount a spirited defence of the archive and to communicate it loudly and proudly beyond our professional boundaries. (Gauld, 2018.)

Like Gauld, I believe that "core professional tenets and competencies have a place in the 21st century". Nevertheless, it is also my belief that both the science and the profession should take a broad view on matters.

If we take a closer look at information in archives or examine what takes place in the society, we see that narrow views do not match the reality. For example, in any archives there are paper documents that do not fill all the criteria of a proper record. For instance, there are documents in which organizational context is recognizable but whose author or exact date of creation is not known. Likewise, people use all the time information that is not properly contextualized from the archival point of view.

We should be able to understand how and when this is possible. Thus, instead of "records" and "non-records", we should see different shades of "recordness" and evidentiality, and to be willing to cope with all forms of information, being ready to get involved with different measures when we see a reason for action. We should be ready to look at all kinds of information and all kind of information usage across contexts, recognizing that "usability" is not a fixed concept and what it requires may change from one situation to another, and to be ready to combine our knowledge of this with knowledge about how the usability can be achieved with minimal cost and effort. Thus, for instance, we might sometimes see that the digital information must be fully contextualized with records metadata, but in other cases be satisfied with more general descriptive information.

This readiness is of paramount importance in digital world where borderlines between records, publications, and other forms of information are often fuzzy. This approach might be the path to professional success in organizations which need more general solutions for management of all their data than specialists coping with only slice of this information. It would also open new paths for research and theorization.

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Pétria de Vaal[1], Antonio Monteduro[2]

TRANSLATING ARCHIVES

Abstract

In this paper the authors submit some general considerations about the absolute need of a translation of the archival terminology, in order to obtain an unambiguous identification of the concepts daily used during the archival activities, and a perfect coinciding of meanings in the different languages.

After a general introduction about the matter, a case study is presented, a case study regarding the Afrikaans language, underlining what a challenge it is to translate archival terminology into this "young" language. On the one hand, the opportunity constantly arising to create new appropriate terminology, on the other hand, the tendency and temptation to use English terminology as is. Many items are analyzed to serve as an example.

Key Words: *Archive, Translation, Afrikaans.*

1. INTRODUCTION: THE NEED OF A TRANSLATION

In the first part, the present work aims to give a general overview of the problems and the challenges arising when speaking, writing and/or reading about archival science, and in the second part offers a particular study case related to a "young" language, Afrikaans. The methodology used in the paper starts from a general point of view, assuming the (obvious) fact that in order to really understand each other and, what is more important, to share the possible solutions to the problems connected with a correct managing of the archives, both traditional and digital, the mos important thing is using a common, shared terminology. The work will then proceed by trying to underline the extreme importance of a mutual understanding, which can be given only by sharing the same concepts in the various languages, and in the second part, as mentioned above, the general concepts will be exemplified by taking in consideration the problems arising when building up archival terminology in Afrikaans language.

Among the many effects of the still ongoing globalisation process, one of the most important is with no doubt the need of a common standardized scientific language, aiming to better interconnect professionals from all over the world, in order to best share their competencies and knowledge.

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In the field of archival science, these process and goal are much evident: the archival tradition and practice present in the various countries are often quite different one from the other, since they take origin from different administrative and legal environments, originating on their turn different ways of expressing concepts and objects.

In this sense, we should also never forget that, in spite of the fact that archives are commonly conceived as cultural goods, they are in fact *"the ordered collection of documents of an institution or individual, established during the course of her/his business and kept for the achievement of political, legal and cultural purposes"* (Eugenio Casanova). In addition, *"the archive ... was born spontaneously, such as a documentary sedimentation of an administrative, practical, legal activity"* (Elio Lodolini).

Therefore, it is vital finding an unambiguous identification of the concepts daily used during the archival activities, in order to obtain a perfect coinciding of meaning in the different languages both of the countries presently dealing with these problems, and of those countries which will have to deal with such matters.

More, in order to ensure a proper management of the archival heritage, and to avoid the risk of dispersal, or, worse than ever!, a definitive and irreparable loss, it looks quite important a standardisation (which is not by force of circumstances a trivialisation) of the technical-scientific language pertinent to the archival science. This will also supply the professionals, the private and public archival administrations, and the users, with a further instrument suitable to an unambiguous communication, aiming to establish a shared language fostering the best integration and exchange of non-mistakable data.

The fundamental requirement to best end such a process is the existence of a communal and codified language, a language enabling the crossing from a linguistic world to any other with no breaks leading to possible misunderstandings, and without being forced to get help by passing through a third language. Hence, the international production of a set of linguistic supports which let an almost literal translation; but a production that to date already shows, in my humble opinion, two fundamental limitations.

The first limitation is given by the scarcity of different linguistic universes in the available dictionaries of archival terminology. The most used languages are the usual most spoken languages in the world; the only exceptions are the ICA Multilingual Archival Terminology (https://www.ica.org/en/online-resource-centre/multilingual-archival-terminology) and (as we will briefly see further) the IIAS Multilingual Dictionary of Archival Terminology (http://www.iias-trieste-maribor.eu/index.php?id=61&L). The mutual understanding and help are made even more problematic by the absence of a common language, a common expression of the same scientific concept, and the difficulties are accentuated by the legal and administrative differences existing between the various countries.

The other limitation is the one given by the frequent non one-to-one linguistic relations. In many cases for a single term of one language, there are more possibilities of terminology in another. Or, a term only corresponds to another language by periphrasis, so that one must necessarily make the transit from one language into another through a third common language, making very often the whole process complex and misleading. And all this not to speak about "relatively new born" languages, as for the Afrikaans about which you will hear by our colleague Pétria de Vaal .

In addition, there is also another difficult, possibly the most important. As said, archival science differs among the different countries because it gems from different legal and administrative environments. Just to make an example, let us think about the great diversity existing between *common law* and *civil law*: the legal theory and practice (lead-

ing to administrative theory and practice) cannot not be compressed in a most common juridical factor, and juridical concepts leading to administrative practices cannot be shared easily and with no possibility of mistake.

How to get out of the riddle of an honest and useful translation of terminology, then? Maybe, a possible answer could be translating not the mere item itself, but translating the concept, the very particular juridical and administrative concept that led to the use of that very particular item and trying to find a correspondence in this way. It is of course not such an easy path to travel: one needs to have competences not only in the field of archival science, but also in the fields of legislation, of history, of administrative theory and practice, and so on and so forth.[3]

What could the archival community do, then? How could we all improve the use of a common "speaking" about archives? There are possibly two main instruments to achieve such an improving: the first is organising very frequently international events in the fields of archival science, in order to give to the archival community the possibility of sharing knowledge and competencies. The second instrument is sharing all these competencies and knowledge to the younger generations of colleagues, and this can be done by supporting and improving the number of archival science courses in the universities and by organising international events like the IIAS Autumn Archival School.

And, finally, maybe the very proper solution to the linguistic challenges, an to all the other challenges faced by the modern archival science is a teamwork. Which is also the future (or even the present too?) of our profession. The archivist is not any more (if ever she/he was) the oldish one wearing a peak and black half-sleeves, shuffling through weak lighted corridors full of shelvings carrying dusty files. The archivist is, or should become, the *primus inter pares* of a team of specialists in various disciplines (law, history, palaeography, diplomatic, fundraising, advertising...), coordinating their work in order to better manage the archive and the documentation. And one of the specialist in the team should be a linguistic expert, willing to help in analysing and comparing, and realizing a tool aimed to a better communication between different archival traditions.

One of these tools, as I briefly mentioned before, is the IIAS Multilingual Dictionary of Archival Terminology (http://www.iias-trieste-maribor.eu/index.php?id=61&L). Made up during the years with the cooperation of the people (lecturers and students) which attended the IIAS International Archival Day and the IIAS Autumn Archival School, it counts now 24 languages that translate a basic but nonetheless very useful set of items. The final goal being, acting as a tool for a better sharing of competencies and experiences, in order to increase cooperation and professionalism in the field of archival science. Moreover, IIAS considers the Dictionary as a perpetual work in progress, to be constantly adjusted and increased following the future modifications of the languages.

And what is more, by meanings of this accurate and precise work leading to a perfect comprehension of the contents of the documentation, the archives will not only able to be more and more shared to the people all over; but also, just because of this increased easiness in being understood, and used, they will more and more be able to fulfil one of their most important tasks: witnessing the truth.

And, by witnessing the truth, more and more becoming veritable custodians of human rights.

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3   I am in debt with our colleague Martina Schuster of another, intriguing, solution: using an archival terminology dictionary like an app, linking the items not only one-to-one, but one-to-many, with the possibility of consulting suggested relevant entries (Wikipedia style) in case one language is not able to return exactly the concepts of another one. (Monteduro)

2. A CASE STUDY: AFRIKAANS

This is an attempt to explore ways of translation of terminology in the Archival workplace....and attempts to find a way to translate correctly and where a need for translation is noted (for instance where a literary translation does not convey the actual process or object which the field requires). This is also an attempt to offer a method or procedure in order to overcome the problem.

I was confronted with such a mandate when I was asked to translate and/or transcribe a set of archival terms into my mother tongue which the archivist might encounter in the workplace on a daily basis.

Some of my findings are shared here on condition that this be seen and experienced as an informal discussion rather than a formal presentation during which we can learn from each other's languages and the problems which they might pose in the translation process.

The interesting part, and that is because every language is unique and alive in its own right, is that often something goes lost and something might be gained in the process. Music terminology stays the same in scores and sheet music. "Forte" means "loud". It is never translated.

It is said of poetry that "Poetry always gets seasick when ferried to another country". I think this is applicable to translation efforts in all forms of written texts.

The Afrikaans language has a predominant Germanic vocabulary, as opposed to English that has both Germanic and Romance vocabulary. In fact, English is classified as a Germanic language with a predominant Romance vocabulary. It is also considered as the language with the vastest vocabulary of all modern languages. There is of course a whole history underlying this phenomenon, which we will not go into detail for purposes of this study.

From a practical point of view, this means that a knowledge of Latin will help the English student or speaker in order to analise words to get behind the meaning thereof.

On the contrary, a knowledge of Latin will seldom help the speaker of Afrikaans to ascertain the meaning of a word. Where a Latin word was directly taken over into the language, the meaning will have to be learnt off by heart without understanding what the original core meaning was (word ethimology) – examples to follow below.

Afrikaans is the youngest official language in the world. It is about 150 years old. It originated out of the Dutch, which was brought to The Cape of Good Hope in 1652 by Jan van Riebeeck (1619 – 1677). He had signed a contract with the Dutch East India Company (VOC) to oversee the setting up of a refreshment station to supply Dutch ships on their way to the East. Van Riebeeck was accompanied by 82 men and 8 women. (https://www.sahistory.org.za/article/arrival-jan-van-riebeeck-cape-6-april-1652).

> For more than two centuries, the spoken language in the later South Africa, was Dutch.
>
> According to Nienaber (1959), a Professor in Afrikaans Literature, the person who can be considered as "the father of Afrikaans', Arnoldus Pannevis (1838 – 1884), was a Dutchman by birth. He was well versed in the classical and various modern European languages. As a teacher at the Paarl Gymnasium (a local school), he had considerable influence on one of his pupils, the later Reverend SJ du Toit. Du Toit's eyes were opened to the existence and utility of the Afrikaans Language. Pannevis indirectly set the First Afrikaans Movement in motion by means of his letters advocating a translation of the Bible into Afrikaans addressed to the De Zuid-Afrikaan (Dutch Newspaper at the Cape) (1874) and then to the British and Foreign Bible Society (1874).

Pannevis realised that the spoken language was much different than Dutch and that not all the Afrikaans speakers could understand the Dutch Bible any more.

Although Pannevis was not present at the founding of "The Association of True Afrikaners" or "Genootskap vir Regte Afrikaners" (GRA), one can say that he paved the way. Malherbe, who's house is now the Afrikaans Language Museum in the Paarl, Western Cape, was one of the eight founding members of the GRA, which was established in the dining room of this house on 14 August 1875. The purpose of the Association was to establish Afrikaans as a formal language.

We also have several remnants from other languages with which the Dutch language had rubbed shoulders during its development. An example is French, brought by the French Refugees who came to South Africa. The largest number of Huguenot refugees who fled to the Cape of Good Hope arrived in 1688 - 1689. By 1692, a total of 201 French Huguenots were resident at the Cape, mainly in the area of the current town of Franschhoek. Here they could enjoy religious freedom. (http://www.hugenoot.org.za/gesk-hug.htm).

Another language is Portuguese that also had an influence which were brought to South Africa mainly by the mariners.

The handful of amateur linguists (who started off as the "GRA" as mentioned above), struggled for recognition that a new language was born. It went through two major "movements'' and a big deal of oppression before it was able to establish itself as a written and official language in 1925.

Afrikaans fought its own struggle for existence ever since... and who was its main enemy? English! About fifty years ago, there was an active movement to promote Afrikaans. The usage of words and expressions directly borrowed, translated or transcribed from English, were condemned. They were called "Anglicisms" and this word became somewhat of a swear word in Afrikaans. This caused Afrikaans to start creating and inventing its own words in almost every field of human existence: medical, sports, engineering and what not. People started compiling dictionaries for every academic field thinkable.

This stimulated the Afrikaans creativity but also resulted in some absurdities which are seldom or never used today. The tendency was to move away from any form of foreign looking or sounding words which no-one except the linguist could in any case identify. The method which emanated from this requirement as I observe it, was to rather describe a procedure or the outcome of an action rather than to use an existing set of letters already well known in English or other languages. Afrikaans must have its own word, and that was the motto and the goal.

This endeavour proved highly successful and longstanding in the end. This is maybe a method to keep in mind - describing a procedure or the outcome of an action – when translating terminology into other languages.

But as everyone knows, language is a living entity and will not stay stagnant. It is used by living entities and times change as well as events and circumstances like the appearance of the Computer and the mobile phone. Although it is generally accepted that IT-language will be English, Afrikaans has its own set of terminology, hard as it is to believe. Whether these will withstand the test of time in a world where English is the world leader in this area, will have to be observed.

The two "movements" referred to above were painful. Only later on it could be recognised as a new and independent language in its own right. My prediction is that it will shortly undergo yet another "language movement" in which more and more English words will have to be taken up in our standard Dictionaries. A very good example is the word "Taxi". Language purists fought for a long time to keep it out of our moth-

er tongue, and tried to force us to stick to the term "huurmotor" which literally means "Rented car", but "huurmotor" lost the case. The same happened to "kartonhouer" (box) which is plainly spelt "boks" nowadays but is quite acceptable. For years purists had worked to set up a list of terminology applicable to motor parts. The difficult one was "piston". If you think of a "pistol" this word describes the shape of the device. Afrikaans decided rather to use the action or function performed by the device, which is "suier" (sucker) but no one uses it in this sense, so that even if you try, you won't be understood correctly. Everybody knows what a "piston" is, and I predict that this word will become official in Afrikaans as well.

I came across a very descriptive golf-term (in the newspaper of course, because no-one would use it in everyday speech) namely "die bal het in die sukkelveld beland" for "the ball landed in the rough". "Sukkelveld " will literally mean "struggle field"...thus difficult to get out! This is an example of a very creatively invented Afrikaans word, as I said, but again I doubt whether it will become widely in use by the sportsmen themselves. This is only one of many examples.

Another reason why I foresee a bright new version of Afrikaans in the near future, is especially whereas Afrikaans has speakers from a bigger range of population than in the past, and due to political and social changes in our daily life, it will be spoken with more and more shades which will have to be acknowledged, even in the media. I think that a "standard" Afrikaans will always be important, like in every language, but Afrikaans will have to become more accommodating and will have to expand.

In this respect, I can think of at least one example. The word "song" is "lied" in Afrikaans. (It is the same in German). But nowadays singers of modern or "POP" music never use the word "lied" anymore. In this genre, "lied" had become "song", and nobody complains about it. So, the word had adopted a new semantic "shade" in Afrikaans.

Neologisms is "neologismes" in Afrikaans. This term, in itself, has been replaced by a new word, namely "nuutskeppinge" which literally means "new creations". One of these words is the Afrikaans word for "drone". This is "hommeltuig" – named after the bumble bee (the sound that it makes!).

This phenomenon brings us a little closer to the abilities of a language like English, which is known to have the biggest vocabulary of all languages. For almost every romance word, there is a Germanic synonym!

Let's get more practical and go through the list of archival vocabulary which I had worked on in order to find appropriate translations in the Afrikaans workplace environment.

To start by way of example, the very first word ACCESS (the Germanic synonym will be 'entrance') is clearly derived from the Latin word ACCESSIO which can either mean "to get closer to" or an "addition" to something. In the following words this meaning is clear in the English. But to the speaker of Afrikaans the word ACCESSIO means nothing. Afrikaans chose to apply the meaning "to get closer to" in the first instance, namely "toegang" which is compiled of two words meaning "towards" and "to go". But further on in the case of "ACCESSION" the second meaning of the Latin word was utilized namely "to add something to". The word "AANWINS" is compiled out of the words "to apply" and "value" or "profit". In other words. "AANWINS means literally "to apply something valuable". Think of jewellery as an "ACCESSORY"!

The stem of the word "ACCRUAL" is "to grow" in Latin (ACCRESCO). In Afrikaans ("AANWAS") it is the German once again, which is visible: the preposition "aan" means "to add" in this respect and the "was" part is "wachsen" in German ("to grow"). Therefore, something that becomes "bigger".

The interesting thing, if we look further on, is that in a term like "audio visual" we see an example where the Afrikaans kept the Latin stems and meaning. This is because AUDIO ("to hear") and VIDEO (" to see") is commonly known and used in medical terminology (interestingly) it is the past tense form of VIDEO, VISI, which is widely applied in other languages .... it kept the "s" sound rather than the "d" sound. Only the Afrikaans spelling in the compilation "oudio-visueel" had been adapted and utilised).

Another noteworthy example is BUNDLE which can be translated into Afrikaans as either "bundel" or "bondel". "Bundel" is used when a collection of books or documents (also literary works like verses and short stories for instance) is referred to. A "bondel' is a collection or compilation of objects.

It is unclear if the word BRIEF refers to an adjective or a verb in the workplace, therefore I had difficulty in making a final decision. We have exactly the same word in Afrikaans (also in German) which means "letter" like in writing a letter to someone. But the alternative meaning is derived from the Latin word "brevis' which means "short' and which can also mean a "summary" as most of you will be able to understand.

In the legal world for instance, if you "BRIEF" someone, you give an instruction and then you will often summarise or shorten your instruction by putting it into a paragraph or short "letter" form. In this case "brief" will have a Romance origin and "letter" will have the Germanic grandfather!

In Afrikaans there are thus these two possibilities: "Om opdrag te gee" (verb) (to give an instruction) or "kort weergawe" ("summary"). I doubt whether this has anything to do with writing a letter in the normal sense of the word, but rather to "give instructions" (verb).

The word CHRONOLOGICAL represents an instance where a Greek word withstood the test of time. CHRONUS was of course a Greek god, and he has a specific legend which surrounds him. Without having to go into the whole story, he was the one who ate his sons one by one (in 'chronological' order.... the moment they were born in order to prevent them from becoming more powerful than him and killing him when they grew up. We still use this word in Afrikaans, and even kept the Greek "CH" spelling, which is very rare in Afrikaans. "Chronical medicine" becomes "chroniese medisyne". In this sense it means "ongoing" or "continuous" which also implies the lapse of time.

The origin and exact meaning of the word "engrossed" might be unknown to most of you, but is very interesting to look at.

The word "gross" might be recognizable to those who understand German as meaning "big". So, literally an "Engrossed copy" should be a copy written or copied in "bigger format" or "font" as we say today. It might still be the case in the workplace.

The legal meaning of an "engrossed copy" or "grosse" in Afrikaans, however, is a handwritten or typed copy which is identical to the original copy. This practice was of course widely in use and even very important in times before the invention of the copier machine and/or the scanner! In the legal world the Attorney (or his secretary) had to reproduce a very precise version of the first document. A Notary had to certify this document as a true and correct copy of the original and in doing that, he had to put his official stamp on the copy. He contracts a big deal of responsibility upon himself should this afterwards be found not to be the case. This means that he had to peruse the document very closely to spot even the slightest difference.

The original meaning and reason for the copy being made in "bigger letters" is unknown today...one can just guess that maybe this was implemented in order to make the copy more visible, readable or even more solemn than the original. However, this requirement had fallen away.

This custom is however, a very old one which is even mentioned as early back as in the book Jeremiah (32: 9-12) where Jeremiah bought land in order to help an impoverished relative. The procedure is described in detail in the Bible and then mention is made of the duplicate copy which had to be sealed and put away for safekeeping, as proof that a legal sale of land took place.

The term: "CURRENT" is also problematic to translate. It is not an uncommon phenomenon that some words are sometimes seemingly quite difficult to translate, regardless of the language into which the translation is supposed to take place.

The Latinist will, however, immediately recognize the word "current" as being derived from "curro" which means to run. A current account at the bank means an "active" or "running" account. This means that the account or document is still frequently in use.

In Afrikaans we call a "current account" a "lopende rekening" which literally means "walking" or "going" account, like in "a running concern or business": Very much alive and going on on a daily basis.

The direct translation "lopende dokument" ("current document") will not go down well in the Afrikaans mouth. The same challenge applies to "semi-current" records' – difficult to translate.

I can suggest: "aktiewe" (active) or "relevante dokument" ("relevant document"), but I am still awaiting suggestions from colleagues or interested parties.

I just presume that in the absence of a real or official translation, the word "lewendig" would be used on a daily basis! This simply means a "living" document.... or a document which is still "alive'.

The term "retrieval" is an interesting one. Although it has been translated as "herroeping", it is not a common term used in an archival environment. In Afrikaans there are TWO terms related to "retrieval". The one is: "ontsluiting" which literally means "to unlock". The implication of this is the actual description / indexing of archival material as well as the making available ("beskikbaarstelling") of the archives. It was found that, when explaining "retrieval" to Afrikaans-speaking archivists, it is not that simple. It implies the TWO concepts.

3. CONCLUSION

It is a challenge to translate Archival terminology into the "young" language Afrikaans. On the one hand, the opportunity constantly arises to create new appropriate terminology. On the other hand, the tendency to use English terminology as is, is a temptation. Although South Africa has 11 official languages, English is the "working" language. However, certain institutional archives require archivists that are fluent in Afrikaans, due to the nature and language of the archival material.

It should also be kept in mind that relatively "young' archival material (South Africa's written history only reflected in archives as from the mid-17th century), may demand a different approach (and terminology to a certain extent) in terms of the relatively newer "types" of records.

Previously (± 15 years plus), students in archival science had the choice to study in either English or Afrikaans, as study material was provided by the relevant tertiary institutions in BOTH languages. At present, to the author's knowledge, study material is only available in English. South African Archivists in the profession should, however, always translate, create and implement archival terminology. This does not only apply to Afrikaans only, but to all the other official languages.

It is a constant need to revise archival terminology – also the list that is available in English. The reason for this is that new terms – reflecting procedures and activities - are constantly implemented in the profession and needs to be accommodated.

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ARCHIVAL SCIENCE IN THE CZECH REPUBLIC

Abstract

The archival science in the Czech Lands started to develop until after the establishment of the Czechoslovak Republic in 1918, and, more significantly, after the WWII. When theoretical issues were being discussed the term "archivistics" was coined, first for the archival theory as the opposite of practice, namely under the influence of Slovak archivists, later as a complex term for archival science in its theoretical and applied form; the term "archiving", however, is still preferred in the Czech Republic. Currently, the archival science (or theory) is limited primarily to some problems, which are the subject of the present text: the definition of important archival terms and setting up the archival terminology, questions of selection and reception of archival material and, most recently, namely the recordkeeping of archival material.

Key words: *archiv science – archival terms – selection of archival material – keeping records of archival material – ordering principles*

While in Europe the archival science, or archival theory, started to develop since the early nineteenth century, mainly in Prussia, later in Italy, the Netherlands, Poland and Germany, in the Czech Lands its origins cannot be traced back until after the establishment of the Czechoslovak Republic in 1918, and, more significantly, after the WWII. Many scholars have contributed to its development.

1. DEFINITION OF ARCHIVAL SCIENCE IN THE CZECH REPUBLIC

The term "archiving" has been traditionally used and still is, understood first as a subject in a curriculum and, second, as the management of records including its organisation and protection or archival material. As an independent and distinctive science it has been pioneered only since the mid-twentieth century when more intensive discussions on the topic were started, namely in relation to the archival methodology which was being established at that time. All along, however, there have been voices have been heard claiming that it was mere practice and experience. The establishment of the Scientific Archival Board (1957) became a major milestone as the board set as its goal to publish the *Archival Guidebook*. It did not concern itself with the issue of the scientific conception of archiving but, indirectly, it showed that given the subject of its study and methods used archiving indeed had a scientific character. When theoretical issues were being discussed the term "archivistics" was coined, first for the archival theory as the opposite of practice, namely under the influence of Slovak archivists, later as a complex term for archival science in its theoretical and applied form (*Hanzal 1965; Šamberger 1970, 1971; Babička – Kalina; Štouračová 2013, pp. 17–18; Sulitková – Pokorný, p. 9–11*); the term "archiving", however, is still preferred in the Czech Republic. The Archives and Records Service Act no. 499/2004 Coll. defines archiving as the "field of human endeavour focused on the recordkeeping of archival material as a part of the national cultural heritage and fulfilling administrative, informational, scientific and cultural functions" (*Act 2004, § 2a*).

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The main problems of archival theory in the Czech Republic, which are the subject of the present text, include the definition of important archival terms and setting up the archival terminology, questions of selection and reception of archival material and, most recently, namely the recordkeeping of archival material.

Other issues of archival theory (or archival science) in the Czech Republic include problems of archival legislation, technology (building and adaptations of archival buildings, depositories and research rooms), care of archival material, education of archivists, as well as information on the history of archives and on archival science abroad, or major archivists-scholars. These will be left aside in the present text too.

Two basic journals constitute the main forum for archival science in the Czech Republic – *Archivní časopis* (The Archival Journal) and *Sborník archivních prací* (The Anthology of Archival Studies). Opportunities to discuss various issues have been provided, since the late 1980s, by national archival conferences, whose papers are published in anthologies. Summary information on archiving, or archiving science, are provided in books by Josef Bartoš (and Karel Chobot; *Bartoš – Chobot 1995, 2000*), Jiřina Štouračová (*Štouračová 1999, 2013*) and newly Ludmila Sulitková with Radek Pokorný (*Sulitková – Pokorný*).

2. DEFINITION OF BASIC TERMS

Unfortunately, currently there is, in the Czech archivist literature, no comprehensive authoritative dictionary of archival terminology, only older tools are available. In the late 1980s some Czech specialists collaborated on the drafting of dictionaries of archival terms for countries of the socialist bloc. These were then published in Warsaw in 1972 and in Moscow in 1982 and 1988. In the 1990s the efforts to put together a Czech dictionary intensified, but only a survey of about 400 archival terms was compiled, out of which a selection was to be made and definitions to be worded. However, this work was later stopped as the new archival act was being drafted (*Sulitková – Pokorný, p. 13*). In the subsequent years the questions of archival terminology were dealt with mainly by Zdeněk Šamberger (*Šamberger 1976, 1987a,b, 1995a,b*). The following texts focuses on the most important terms and explains how these are understood in the Czech context.

2.1 Archive

The historian and archivist Václav Vojtíšek (1883-1974) was one of the first scholars who dealt with archival theory more substantially. Vojtíšek served as an archivist and long-term director of the Archive of the Capital City of Prague (1909-1949, since 1921 as its director), but also as the scholar in the Archive of Charles University and later the director of the Central Archive of the Czechoslovak Academy of Sciences (1952-1968), while at the same time he was a professor of auxiliary historical sciences at the Faculty of Arts, Charles University in Prague. As early as 1924 he made a definition of archive, in which he emphasised that materials should enter the archive only after a process of appropriate selection. "The archive is a complex of written and other related sources (prints, plans, pictures, photographs) of documentary nature, which have undergone the process of selection for administrative and scientific purposes and have been selected from the material compiled by organic office activity" (*Vojtíšek 1924, p. 7*). It was very important that he put emphasis on the expansion of the content of the materials archived, the principle of provenience as well as on the balance between the administrative and scientific purpose of the archive. As this definition applies in fact only on the archival fonds, Václav Vojtíšek remarked in 1934 that the term archive denotes in Czech namely the institution that contains archival fonds of various proveniences, and suggested to adopt the term "archival office" for such an institution (*Vojtíšek 1934a, p. 464*). This sug-

gestion, however, did not come into the general usage. Václav Vojtíšek also refused to recognise the so-called "artificial archives" created by mere collecting (such as literary archive) (*Štouračová 2013, p. 20; Sulitková – Pokorný, p. 3*).

Scholars who came next only slightly refined this definition — Václav Hrubý, in 1930, suggested to replace the word "complex" with the term "systematic complex" (*Hrubý, p. 10*). Jaroslav Prokeš, for the purposes of the drafted (yet non-passed) archival act before the WWII, had to word a more concise version that emphasised a wider conception of archival material: "The archive is a large collection of written monuments, organised by their origin or in any other way" (*Sulitková – Pokorný, p. 3*). The emphasis on the archive as a collection of fonds, created organically and organised by provenience (against collection archives), was proposed by Zdeněk Fiala (*Fiala 1951*). The widest definition, taking into account various ways in which archives came into being, was provided by the *Archivist Guidebook* in 1965: "The archive is a collection of written and other related documents, created by selection for administrative, operational and scientific purposes from material gathered by organic activity of a certain institution (office, corporation, company, institute etc.), potentially its operationally and organisationally divided part, or a collection of documentary material of non-administrative nature, created by the political, scientific, economic or other public activity of an individual." (*Čechová – Holl – Nuhlíček – Radimský – Šamberger – Vrbata, p. 125–126*). This definition was subsequently followed upon by other (*Wurmová 1967, 1969; Šamberger 1976*), while the most recent Archives and Records Service Act of 2004 (no. 499/2004 Coll.) provides only a brief definition (*Act 2004, § 2c*).

2.2 Archival records

The attitude of Václav Vojtíšek was also important for the definition of the term "archival records" (archivalia; *Vojtíšek 1934a*). A detailed definition, however, did not appear until the Archives Act of 1974 (no. 97/1974 Coll.) and its subsequent amendment of 1992 (no. 343/1992 Coll). "Archival records are written, pictorial, audio and other records that originated from the activity of the government or other bodies and organisations and from activities of individuals and have, given their historical, political, economic or cultural importance, a lasting documentary value" (*Act 1974, § 2,1; Act 1992, § 2,1*). The definition of 2004 is similar, "Archival records are such documents that were, given the time of their origin, content, origin, external features and their lasting value, given by their political, economic, legal, historical, cultural, scientific or informational importance, selected in public interest for permanent keeping and taken into the record of archives" (Act 2004, § 2f); at the same time archival records included seals, stamps and other material objects related to the archival fonds or the archival collection, as well as digital documents with the term "document" being preferred — it is "every written, pictorial, audio or other record, either analogue or digital, created by the originator or delivered to the originator" (*Act 2004, § 2e*).

2.3 The Archival Fonds

Václav Vojtíšek had striven to define the archival fonds, but a major definition did not appear until 1954 (*The Dictionary of Archival Terminology:* "The archival fonds is a collection of papers, dossiers and books originated from an organic activity of a single office, institute, company etc."; *Roubík – Kollmann – Haas – Fiala, p. 17*) and 1965 (The Archivist Guidebook: "The archival fonds is a collection of archives with common origin, content or unified treatment"; *Čechová – Holl – Nuhlíček – Radimský – Šamberger – Vrbata, p. 125*) with emphasis put on the fact that an archival fonds is created not at random but by an organic activity. The Archives and Records Service Act no. 499/2004

Coll. defines the archival fonds as a "collection of archival records that was assembled by a selection from documents created by the activity of the originator" (*Act 2004, § 2h*). Václav Babička and Tomáš Kalina expanded the concept of the archival fonds significantly when they emphasised that it was not just a sum of archives but rather a system consisting of archival records and relations among them and they also drew attention to the fact that the provenience principle be observed, which means that this system must not be compromised — i.e. the whole, its parts and relations among them (*Babička – Kalina, p. 203*).

Besides **simple fonds** (jednoduchý fond), **complex fonds** (složitý fond) was defined too. František Hoffmann describes them as fonds with a complex internal structure, originating from the activity of several offices (in the diplomatic sense of the word) serving a single institution, either simultaneously or in time sequence (such as fonds of court, estate, aristocratic family, church or municipal fonds); at the same time he defined three types of these fonds (1. a single complex fonds as a product of a single originator with a single complex office; 2. an integral collection of more or less tightly knitted fonds as a product of a single originator with multiple interlinked offices; 3. a group of fonds creating an ideal complex as a product of a single or more originators with multiple offices related by certain continuity; *Hoffmann 1974*).

Until the late 1990s, the Czech archival science also used terms a **compound fonds** (sdružený fond) for small fonds of the same kind adopted by a single archive or a **mixed fonds** (smíšený fond), denoting fonds of various kinds but, for instance, from a single locality). These two could be processed by a joint inventory; the terms are currently not in use (*Sulitková – Pokorný, pp. 5–7*).

Since the 1960s, the term **personal fonds** (osobní fond) has been defined mostly as the written estate of a physical person, which, however, often contains documents collected by other persons than the originator, or documents of collection character which do not have a direct relation to the originator. By the latest definitions the personal fonds is "a collection of written, photographic, film, pictorial and other documents, which originated organically in the course and in relation to the life and activities of a single physical person (or members of the person's family), it documents the main directions of the person's life, activities and interests and is of independent scientific value" (*Šimeček; Boháč; Wurmová 1973; Chalupa; Hanzal 1975; Edererová – Podaný; Sulitková – Pokorný, pp. 44–46*). Besides this, the **dynasty fonds** (rodový fond) was specified in the course of setting up rules to process archives — while in the case of a personal fonds the originator is a single physical person or several physical persons related by family in three subsequent generations at maximum, in the case of the dynasty fonds it is several physical persons from more than three generations related by family relationships (*Hoffmannová*).

2.4 The Archival Collection

Contrary to organically created archival fonds the collections represent files of written and related documents, originating from more or less conscious collecting activity of an archive or individuals who put them in an archive, and containing intentionally gathered documentary material of the same type (photographs, newspapers, graphics). In this case it is a collection of separate items unconnected by mutual relations of provenience (*Babička – Kalina; Sulitková – Pokorný, p. 8*). Collections, however, should in no case consists of separate items (such as photographs), selected from archival fonds. The Archives and Records Service Act no. 499/2004 Coll. thus defined the archival collection as a "collection of archives interconnected by a single or multiple common features" (*Act 2004, § 2i*).

2.5 Registry

Older studies define registry as 1) a collection of written documents originated by an organic activity of an institution and organised by a certain system — the order of registry; 2) a department of an office serving to store and keep record of documents originating from its activity. In the older period, the Czech word registry (registratura) meant the filing cabinet, i. e. a special cabinet with pigeon holes to store documents from the office (*Babička – Kalina; Sulitková – Pokorný, pp. 12–13*). The Archives and Records Service Act no. 499/2004 Coll. defines registry as a "place designed for keeping, searching and delivery of documents for the needs of the originator and for disposal of documents" (*Act 2004, § 2m*).

3. SELECTION AND ADOPTION OF RECORDS, DIGITAL RECORDS

In the Czech Republic, the issues of selection and adoption of archival records is dealt with mainly by the Archives and Records Service Act no. 499/2004 Coll. (*Act 2004, § 3–6*), which clearly defines what subjects and institutions have the obligation to keep records and make it possible to select archival records: these are public originators (the government and autonomous institutions, armed forces, universities and colleges, research institutions etc.), as well as private ones (companies and cooperatives, political parties, political movements, associations, trade unions, organisations of employers, churches and religious associations, professional chambers, foundations, notaries). The selection of records is carried out by the archival institutions by their province. The permanent value of the document in relation to the time when it was created, its content, origin and external features (i. e. visual value, language, type, writing substance, the type of execution etc.) is the criterion of selection. By the time of origin, written documents originating until 1850 or 1900 (from the areas of industry, agriculture, insurance, finance and mining), photographic records created to 1900 and film and audio recordings made to 1930.

Archival records are selected by two basic ways — in the disposal process (*Act 2004, § 7–10*) and outside the disposal process (*Act 2004, § 11–12*). The disposal process is a process in which documents past their disposal date are discarded and are no longer necessary for the initiator's activity. This process has firmly set rules and dates, which are a part of the disposal proposal; each disposal activity is recorded in the disposal protocol. A similar protocol is made even in the case of selection of archival records outside the disposal process (*Bittner et al.; Brom*). The concrete steps are defined by the law.

Recently, the question of selection and adoption of electronic documents has been paid more attention, namely how to maintain their authenticity and to keep them permanently (*Lechner; Sulitková – Pokorný, pp. 16–19*). In contrast to the selection of archival records, these issues are discussed in more detail in Czech scholarship literature, often with inspiration sought abroad. Since 2004, the National Digital Archive has been developed as a pilot workspace for long-term maintenance and accessibility of documents in the digital form. The National Digital Archive was to be a part of the National Archive. However, due to various obstacles (delays in the open request for proposals of the key technology supplier) the project has not been realised. The National Archive thus started working on a new project — the Digital Archive of the National Archive. At the moment, modules have been completed that make it possible for individual archives to make electronic disposal processes and to transfer selected documents for their permanent storing in the digital archive. As of July 1, 2012, the National Archive is obliged to store archival records in the digital form that are within its scope or within the scope of individual archives. Its tasks further include to manage

the national portal for making archival records accessible in the digital form, to fulfil for other archives the methodological and consultancy function in the area of pre-archive care for documents in the digital form and in the area of digitisation of archival records in the analogue form, as well as to provide the individual archives with more information and support (*Sulitková – Pokorný, p. 20*).

4. THE BASIC ORDERING PRINCIPLES AND TREATMENT OF ARCHIVAL RECORDS

In the past centuries, the archival material in the Czech Lands — similar to the Viennese Home, Court and State Archive — was organised mainly along the relational or pertinence principle: this was the case with various municipal archives and namely for the old Czech Gubernatorial (till 1850) and Governor's Archive, in which there were processed and organised by their subjects documents of the Czech Office, Czech Chamber and the Governor's Office from 1526-1650 and from 1651-1760, into the so-called "Old Manipulation" and "New Manipulation" (*Sulitková – Pokorný, p. 24*). The pertinence principle was used for various documents, obtained mostly in the form of a gift, in the Archive of the National Museum, of which several thematic collections were created.

The organisation of archival records that respects their origin and belonging to a single originator, the so-called provenience principle, first applied in the nineteenth century in Saxony, France and Prussia and then clearly defined in the late nineteenth century in the Netherlands, was applied in the Czech Lands shortly after, namely in the archives of some estates, but also in the archive of the Governor's Office (*Sulitková – Pokorný, pp. 24–26*). The Czech environment remained largely untouched by the discussion on the definition of the archival fonds as related to provenience but the contribution of Václav Babička and Tomáš Kalina on the historical and provenience principle in archiving was important indeed. The two scholars, inspired by earlier work, namely that of the German archivist Liselott Enders, gave precision to the concept of provenience in the sense that it includes not just the origin but also relation and pertinence. The two scholars arrived at the conclusion that the "principles of provenience, archival value and archival information make up a triad which can be assessed from the perspective of individual principles but at always with the awareness of their complementarity" (*Babička – Kalina, p. 204*). The topics of pertinence and provenience approach in archiving and the definition of the archival fonds in the Czech context were further contributed to by Jindřich Tomas, Václav Babička and František Hoffmann (*Tomas; Babička 1995; Hoffmann 2004*), while attention was paid to the processing of personal fonds.

5. RECORDKEEPING

The unified keeping of archival records in Czechoslovak archives was introduced at the same time when archives were transferred under the interior ministry by the government decree of May 7, 1954, on archiving. The so-called Unified Archival Fonds (as a central database in which contains information about different archival fonds in the country) was established and every archival fonds was accompanied by a record card with a number of details (*Sulitková – Pokorný, p. 31*). Compliant to the current legislation (Act no. 449/2004 Coll.), the National Archival Legacy is kept instead (*Act 2004, § 16,2*). The basic rules for these recordkeeping are defined in the Decree no. 645/2004 Coll., which is followed upon by the New Basic Rules for Processing of Archival Records, effective as of 2013. At the moment the central electronic database is maintained pursuant to this decree, as it was designed by the Document and Archive Management Office, Ministry of Internal Affairs, Czech Republic. On the level of ba-

sic recordkeeping, the written form is maintained besides the electronic form. The basic recordkeeping is continually updated. Data from the basic recordkeeping are transferred into the secondary recordkeeping from there, in the digital form, into the central recordkeeping. For the purposes of archival recordkeeping, the lists of newly adopted material are very important. New items are entered in the book of external changes, which captures changes in the relation of the archive to other legal persons. Internal changes occur in archival treatment, sometimes called the secondary disposal. Location surveys are an important tool, as they make it possible to navigate the storing of archival records in depositories, or a systematic evacuation of archival records whenever these are in danger (*Sulitková – Pokorný, pp. 31–32*). The most important archival records or their complexes require independent recordkeeping and care, as these can be declared archival cultural monuments or national cultural monuments (*Act 2004, § 21–22*).

Recently there has been an intensive discussion in the Czech Republic on the basic rules for the treatment of archival records, including processing of archival tools in the digital form (*Dvořák – Kunt – Pokorný – Šulc – Wanner*). Gradually, principles have been developed for the treatment of various types of fonds (such as the government, municipalities, communities, church institutions), with detailed attention paid to various types of archival records in archives, stored in both analogue and digital form (i. e. maps, plans, drawings, graphics, prints, seals or audiovisual documents), which are specified in detail. One of the major discussions concerned the recordkeeping units and their definitions. The resulting principles for the description of archival files and archival records reflect, to a certain extent, the international standards for the processing and description of archival records (*Babička 2008; Dvořák 2010; Kunt 2010; Sulitková – Pokorný, pp. 36–51*).

6. FURTHER QUESTIONS

Besides the already mentioned issue of electronic documents, their selection, adoption and permanent keeping (both in the Czech Republic and abroad; *Dvořák – Koucký – Vojáček; Šulc – Vojáček*), or the basic rules for the processing of archival records, the interest of Czech scholars has focused recently on the questions of the protection of personal data (*Kunt 2014; Čtvrtník 2018*) and the destruction of archival documents (*Čtvrtník 2015*), often, however, attention is paid to the history of the archives or archivists (*Lehr; Čtvrtník – Kahuda; Čtvrtník 2009, 2010, 2016*).

7. CONCLUSION

The archival science in the Czech Lands started to develop until after the establishment of the Czechoslovak Republic in 1918, and, more significantly, after the WWII. When theoretical issues were being discussed the term "archivistics" was coined, first for the archival theory as the opposite of practice, namely under the influence of Slovak archivists, later as a complex term for archival science in its theoretical and applied form; the term "archiving", however, is still preferred in the Czech Republic.

Unfortunately, currently there is, in the Czech archivist literature, no comprehensive authoritative dictionary of archival terminology, only older tools are available. The basic terms are defined above all in the last Archives Act (no. 499/2004 Coll.).

In the Czech Republic, the issues of selection and adoption of archival records is dealt with mainly by the Archives Act no. 499/2004 Coll. Archival records are selected by two basic ways – in the disposal process and outside the disposal process. Recently, the

question of selection and adoption of electronic documents has been paid more attention, namely how to maintain their authenticity and to keep them permanently.

The basic ordering principle the in the Czech republic is so-called provenience principle. The problem of the pertinence or provenience principle in archiving and of the definition of the archival fonds in the Czech context were contributed to by Václav Babička, Tomáš Kalina, Jindřich Tomas and František Hoffmann, an attention was paid to the processing of personal fonds also.

The unified keeping of archival records in Czechoslovak archives was introduced 1954. The so-called Unified Archival Fonds was established and every archival fonds was accompanied by a record card with a number of details. Compliant to the current legislation (Act no. 449/2004 Coll.), the record of the National Archival Legacy is kept instead. The basic rules for these recordkeeping are defined in the Decree no. 645/2004 Coll., which is followed upon by the New Basic Rules for Processing of Archival Records, effective as of 2013. The resulting principles for the description of archival files and archival records reflect, to a certain extent, the international standards for the processing and description of archival records.

The interest of Czech scholars has focused recently also on the questions of the protection of personal data and the destruction of archival documents, attention is paid to the history of the archives or archivists.

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ORAL HISTORY AND COLLECTIVE MEMORY:
DOCUMENTING REFUGEE VOICES AND THE CHALLENGES OF ARCHIVAL REPRESENTATION Paul V. Dudman

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Paul V. Dudman[1]

ORAL HISTORY AND COLLECTIVE MEMORY: DOCUMENTING REFUGEE VOICES AND THE CHALLENGES OF ARCHIVAL REPRESENTATION

Abstract:

This paper will explore the concept of preserving refugee rights in the records that we keep, and will explore how we have undertaken civic engagement and outreach work with refugees and asylum seekers in London and beyond to explore ways of documenting their stories through the us of bottom-up oral history methodologies and the use of objectives and textiles as a means of preserving collective memories and a new modes of representation beyond the traditional written word. It will also consider the role of ethics and the role of archives in documenting under-represented communities.

The Refugee Council Archive at UEL is a growing collection of archival materials documenting the refugee experience. This paper will reflect on our work exploring the very nature of what we mean by the concept of an "archive," and explore the challenges of bottom-up methodological approaches for helping to preserve the collective memory of refugees, migrants and asylum seekers in way that enables their voices to be heard in a positive way and is documentation along the best methodology to achieve this.

Keywords: Refugees, collective memory, cultural heritage, oral history, representation.

1. INTRODUCTION

Media representation and political rhetoric on refugee and migration debates are key issues for discussion and debate within Europe. Rarely is this discussion neutral or un-biased and negative representations of the refugee are an increasingly familiar part of political and media coverage across borders. How the most recent "refugee crisis" is documented and persevered for posterity within our archival collections will reflect on how society responds to issues of nationalism; refugees; immigration and questions of belonging and collective memory. This paper will reflect upon the author's sixteen years' experience of work working with archival collections focused on preserving documentation on the refugee and migration experience. It will explore the challenges of documenting, and making accessible, the genuine voices of the refugee and migration experience and of how archives can ethically approach issues of representation in relation to under-documented communities.

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2. REFUGEE ARCHIVES AT THE UNIVERSITY OF EAST LONDON

The University of East London (UEL) has been home to the Refugee Council Archive and a growing collection of archival materials documenting the refugee experience. What began as the need to preserve; catalogue and make accessible the archives of the Refugee Council, one of the largest charities dealing with refugee integration in the UK, over time became a more in-depth piece of work exploring the very nature of what we mean by the concept of an "archive." How do we preserve the collective memory of refugees, migrants and asylum seekers in way that enables their voices to be heard in a positive way and is documentation along the best methodology to achieve this? This paper will explore the concept of preserving refugee rights in the records that we keep, and will explore how we have undertaken civic engagement and outreach work with refugees and asylum seekers in London and beyond to explore ways of documenting their stories through the use of bottom-up oral history methodologies and the use of objectives and textiles as a means of preserving collective memories and new modes of representation beyond the traditional written word. It will also consider the role of ethics and the role of archives in documenting under-represented communities.

The Refugee Council Archive at UEL is a growing collection of archival materials documenting the refugee experience. The archive consists of a series of fonds documenting the work of the Refugee Council as a working charity including traditional archival documentary evidence in the form of correspondence, minutes of minutes, financial records, publicity and fundraising materials, and related records documenting the running of the organisation. The Refugee Council Archive also includes a much larger special collection of materials collected and collated by the Refugee Council during the course of its work. This includes materials organised by region, country and theme including research and NGO reports, press cuttings, community-based magazines and publications, multimedia and audio-visual resources including DVD's and video cassettes, conference reports and presentations, as well as flyers and activist materials. The collection alone now represents one of the largest archival collections on the theme of the refugee experience within the UK. Over the sixteen years it has been located at the University of East London, we have also added new materials to the collection, from academic and NGO reports to audio-visual resources and the outputs from student projects, (UEL hosts postgraduate courses in Refugee Studies; and Conflict, Migration and Human Security as well as undergraduate courses in International Development). We have also had the opportunity to receive new deposited archival collections from other organisations working in the refugee field, including the Council for At-Risk Academics and the Information Centre for Asylum and Refugees. In addition, the UEL Archives hosts archival collections relating to the British Olympic Association; the Hackney Empire Theatre; and a growing collection of archives relating to the history of East London, where the University is situated.

3. CIVIC ENGAGEMENT AND ARCHIVES

During the academic year 2015-2016, the UEL Archives began a series of collaborative civic engagement and outreach projects funded by a newly established Civic Engagement Fund at the University. From 2015 through to the present, we have undertaken projects across all our archival collections with the aim of engaging with our local communities and developing new partnerships. The focus of this paper will be on the work we have undertaken in relation to our refugee and migration holdings, but to help situate these within the context of our wider civic engagement work, we have also undertaken projects developing participatory theatre performances based on narratives found in our collections with second year undergraduate theatre studies students. An

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ongoing local community history project entitled "Tate Lives," which began as a project to document the now derelict Tate Institute building, initially constructed by Sir Henry Tate in 1887 as a sports and social club for workers as his sugar refining factory in Silvertown,, and part of the Royal Docks area of East London where are UEL Docklands Campus is situated, but soon enlarged to cover the wider community history and heritage of an area of East London witnessing a significant period of regeneration and change. In a similar fashion, we have also recently been awarded partnership funding from the Heritage Lottery Fund in the UK, to work with colleagues from London Stadium Learning, a community-based education provider, working out of the former Olympic Stadium in Stratford and now home to West Ham Football Club, on a one year project to document the inter-generational legacies of the London Olympic Games in 2012 and the two preceding London Olympics held in 1948 and 1908 respectively. We have also worked on a project supporting colleagues in our School of Psychology on a project to establish a Refugee Health and Wellbeing Portal for both mental health practitioners and refugees and asylum seekers based in the UK.

All our civic engagement projects to date have involved intrinsic ethical and managerial issues in relation to how these relate to traditional notions of what is meant by an "archive" and in how we document and preserve the outputs from the projects. One of the aims of this paper will be to reflect on the ethical considerations of undertaking civic engagement and outreach projects with vulnerable communities in the form of refugees and asylum seekers and the challenges of attempting to preserve and document refugee and forced migration testimonies using a bottom-up oral history methodology (Hashem and Dudman, 2016). Traditionally archival collections, both public and private, are historically significant as evidence for documenting the individual and community histories over a period time, acting as "keepers of memories both collective and individual." (Rupčić, 2018, p. 218). Archives are often the backbone on which historical narratives are developed and societies' understanding of their shared pasts are constructed, helping to conceptualise community understandings around notions of belonging and otherness and the formation of both communal and individual identities. Who we are, where we come from, where we belong, which community/ies do we associate with, are all intrinsically linked to a sense of history of who we – a sense of ownership and belonging to a certain cultural heritage. Media and official discourses can often look to promote discourses based on a particular telling or retelling of history to help support a particular interpretation of current events, or to appeal to a particular community or section of the electorate. Attempts at re-interpreting historical narratives to support contemporary narrative constructions is not uncommon, the German Occupation Memorial in Budapest, constructed under the cover of darkness and under heavy armed guard on the 20 July 2014 by the right-learning Fidesz party in Hungary. The Memorial to the Victims of the German Invasion is located in *Szabadság tér* (Freedom Square) and was designed to be a memorial to the German occupation of Hungary in 1944, however it has caused controversy within Hungary as for many it represents a "forgery of history" given Hungary's close association with the regime in Germany at this time and their complicity in the expulsion of Hungarian Jews during the Second World War (Dudman, 2019a).

The response was the creation of a counter-memorial directly opposite the official memorial offering a counter-narrative, the *Eleven Emlekmű*, which quickly developed into a collection of personal materials documenting an ever-changing and developing narrative of real people and real lives, for many of whom their voices were lost to history. The debate surrounding this monument and Hungary's involvement in the Second World War reflect debates on how governments and institutions can wield power over the shape and direction of historical scholarship, collective memory and

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national identity, and how we know ourselves as individuals, groups and societies. The post-colonial heritage theory suggests that individuals belonging to a national community have different experiences to a shared past and do not share identical relationships to the same spaces, places and events and therefore conceive their heritage through multiple forms of reference (Dudman, 2019, p. 26). This can represent the potential for these type of formal monuments to be inevitably associated to concepts of nationalism and the development of public history in support of a nationalist approach to remembrance (Erőss, 2016, p. 239).

4. UNDER REPRESENTED NARRATIVES OF REFUGEES IN ARCHIVAL COLLECTIONS

It is within this context that this paper would like to focus on the work we have been undertaking in relation to archives associated with refugee and migration issues. Whilst the United Kingdom has a long history of immigration and emigration to and from our shores, "the common understanding of this history as passed down by the education system as well as by museums, archives and heritage sites, has often glossed over or ignored this crucial aspect of our island history." (Stevens, 2009, p. 5). This reflects a complex historiography of a long history of migration to the UK and the integration of diverse ethnic communities into British society, but which seems to have been overlooked and under-documented in favour of more dominant notions of national history. A former academic colleague here at the University of East London, Professor Philip Marfleet has written extensively on the dangers of refugees being silenced from the historical record whilst being overlooked by historians (Marfleet, 2007), a notion implied in work exploring official records in The UK National Archives, when describing migration records as being "scattered across archives in the United Kingdom and overseas as there is not a dedicated archives for immigration or emigration within the United Kingdom." (Kershaw and Pearsall, 2009, p. 11).

For this paper, the author will use as a case study the work that has been undertaken with the Refugee Council Archive at the University of East London, one of the largest thematic collections in the UK focusing on documenting and preserving materials on the refugee experience, reflecting on the use of a range of archival objects to undertake community outreach and engagement in relation to wider discussions within the discipline of archival science relating to the nature and contest of archives. To place the Archive in context, The Refugee Council is the largest charity in the United Kingdom working directly to support the lives of refugees in this country. The Refugee Council in its current guise was formed in 1981 by the merger of two older organisations, the British Council for Aid to Refugees (BCAR) and the Standing Conference on Refugees (SCOR), founded in 1951 as a response to the United Nations Convention relating to the Status of Refugees to help respond to the refugee and displacement crisis in Europe following the Second World War. In November 2002, the Archive was deposited at the University of East London, one of the earliest universities in the UK to establish a postgraduate programme in Refugee Studies, due to no longer being able to effectively manage and develop the Archive. This was also an example an academic institution offering to support and preserve the archival collection of a voluntary sector institution. The archives of voluntary sector organisations in the United Kingdom is an area of concern which has resulted in the creation of the Campaign for Voluntary Sector Archives `supporting good governance and regulatory compliance within third sector organisations; supporting the preservation of institutional memory and identity.' (Dudman, 2019b). The archives of voluntary sector organisations like the Refugee Council are extremely valuable both for ensuring their own institutional corporate memory is persevered, but also for ensuring that the records of those who they support and as-

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sist or also preserved securely both for the human and citizen rights of the individual, but also for the good of the wider cultural heritage. "Getting my records has filled in blanks as I had lived a life of non-existence, I had nothing of my past, nothing was there, it was empty." (Brewis, 2017) This quote highlights in itself the invaluable nature of voluntary sector archives in helping to support a sense of self-identity, especially for those who may exist outside the more established societal structure, and indicates the dangers for our own collective memory if we do not strive to document and preserve a cross section of our cultural heritage both historically and also right here, right now in the present.

In terms of the Refugee Archive itself, it contains a range of archival materials recording the institutional history of the organisation, incorporating traditional archival records of the minutes of meetings; administrative and financial records; records of correspondence; annual reports; photographs; publicity and outreach materials; and interactions with other refugee supporting organisations and policy and advocacy work in relation to challenging the harsh conditions imposed on refugees and asylum seekers by the UK Home Office. The Archive also contained a substantive special collection of materials, including secondary documentation which had been collected by the Refugee Council in the course of informing its daily work. This special collection incorporates published and semi-published materials relating to all aspects of their work with refugees, covering both the UK and wider international perspectives. Estimated to be in excess of 35,000 items, the special collection includes reports and journals; audio-visual materials; press cuttings and a substantive array of grey literature including working papers; conference papers; leaflets; newsletters; case studies; field reports; statistical data and bibliographies.

Our work initially with the archive was to stabilise the collection within its new environment at the University of East London and to begin a process of cataloguing the collection to improve accessibility as the original catalogue had been lost. This was the very first archival collection that the UEL had taken on and the author was the very first archivist, so there was the added to challenge of introducing archival methodologies to the existing academic library service and introducing the concept of the archive to our students. The objective right from the outset was to make the archival collections that we hold as accessible as possible to both students and academics at the University combined with academics, students, researchers and practitioners beyond the gates of academia. We were focused on the archive not becoming just a collection of dusty boxes locked away on a shelf in the archive with the occasional intrepid researcher braving the archives to see what is there, but for our collections to be a living archive open and engaged with the communities that it serves.

As the collection developed, we become increasingly away of the power dynamics of the archive in relation to both individual identity and community memory. As Schwartz and Cook have succinctly argued, `Archives – as records – wield power over the shape and direction of historical scholarship, collective memory, and national identity, over how we know ourselves as individuals, groups, and societies.' (2002, p. 2). This was of particular concern especially in relation to the refugee voice within the archive, and the ethics of how we should ensure these voices be heard in a genuine form, without prejudice or censor. This raised important questions on how both ethnic and refugee communities, as well as the individual refugee or asylum seeker, are represented within the archival record and the impact this may have on theories around the formation of individual and community identity, which can be very problematic given the transitory nature of the refugee experience. Questions of belonging and otherness had to be considered and whether those whose stories we were looking to document and pre-

serve, would identify as being a `refugee' as opposed to being a member of a political, religious, cultural or political community. We needed to develop a methodology for responding to how refugees would self-define themselves and the disparities this may create between oral and written records. Whilst being predominantly paper-based, the existing Refugee Council Archive and the smaller collections that had been deposited over subsequent years, including the Council for At-Risk Academics, Northern Refugee Centre and Cambridge Refugee Support Group, contained valuable resources for the study of refugees and forced migration, the materials predominantly talked about refugees or reported on research with refugees, as opposed to including the direct narratives from the refugees and asylum seekers themselves, and those who worked with them. We felt this archival silence, the missing voices of the refugees and asylum seekers themselves, needed to be addressed if the archival was too be truly representative of the refugee experience, and to help provide a counter-narrative to the negative `hostile environment' within the political and media discourses in the United Kingdom which sought to demonise refugees in a very negative light. It was also an opportunity to reflect and challenge the author's own role as an archivist responsible for the collection, and to reconsider my own professional responsibility as an archivist in responding to the need of under-represented voices within our archive collections.

During 2015-2016, the author undertook a civic engagement project with Dr. Rumana Hashem, a colleague from the UEL Centre for Migration, Refugees and Belonging entitled Democratic Access or Privileged Exclusion: Civic Engagement through the Preservation of and Access to Refugee Archives with the aim of undertaking a pilot study focusing on the collection and preservation of refugees' and migrants' lived experiences in London. This was an initial attempt to challenge some of the silences and hidden voices within the Refugee Council Archive by undertaking an intersectional approach (Hashem, 2014) `to illustrate how the diverse voices of refugees and migrants of different ethnicities and `race' are often marginalised or left un-heard within the refugee archive and migration research, and even deliberately overlooked in favour of the [more] dominant narratives of the nation.' (Dudman and Hashem, 2019). The project had three core objects to establish a Living Refugee Archive online platform to help facilitate and promote access and engagement with our existing archival collections on refugees and forced migration at UEL; to undertake a pilot UEL Oral History Project to collect life history narratives from displaced persons* in East London and to consider how best to document and preserve the refugee experience (Hashem and Dudman, 2016, p. 192) . (*In this context, we use the term displaced persons as a generic term for refugees, migrants and asylum seekers.)

5. ORAL HISTORY AND THE LIVING REFUGEE ARCHIVE

The project sought to establish the Living Refugee Archive online portal, available at http://www.livingrefugeearchive.org/, in as a response to challenges we had identified in accessing physical archive collections. Whilst we have always sought to make our archival collections at the University of East London as accessible as possible, a number of potential boundaries to access still remain. Service level restrictions can act as a barrier to access with a sole Archivist required to manage multiple archival collections across two university campuses. This can result in limitations on staff time and archive opening times being dependent on staff availability. Limitations can also be evident in terms of collection management with existing cataloguing backlogs meaning delays to the cataloguing of materials and delays in effective finding aids being available to researchers. Barriers to user engagement may also exist in terms of the location of the physical archive, it may be too far away for the researcher to reach of the cost of trav-

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el too prohibitive. We were also aware of that with the archive being located within a university library, this could act as a site of contestation for some user groups, especially when working with displaced persons. With these factors in mind, we were looking to establish a safe and independent space in which could explore some of these issues surrounding the preservation and documentation of the refugee experience beyond the restrictions imposed by these boundaries. We also wanted this to be a `living' archive in the sense that it would act as an online free to access repository of materials documenting refugee testimonies in multiple formats that would help to enable a positive discourse on the refugee and migration experience, both historically and in the present, to enable discussion and interaction with the narratives held on the site.

The project also sought to undertake the collection of oral histories undertaken with displaced persons in London. Five semi-structured and qualitative oral histories were collected in the initial phase of the project with refugees and undocumented migrants. The project followed an anti-oppressive methodology (Dominquez, 2008) facilitating the use of a bottom-up oral history methodology which enabled participants `to speak about anything they liked, for as long as they liked, and could withdraw when/as they needed too' (Hashem and Dudman, 2016, p. 194) which enabled no power imbalances between the participant and the interviewer. These oral histories would follow the `knowledge from below' approach which would facilitate the voices of the participants to be heard unfiltered from any interpretation by the researchers on the project, and to avoid any reshaping of the data to fit any pre-existing research paradigms.

This engagement with oral history in relation to the preservation and documentation of refugee and migrant experiences has continued through the deposit of new oral history collections at the University of East London, including collections documenting the Gujarati experience in the London Borough of Croydon with the Gujarati Yatra collection and the Voices of Kosovo in Manchester (VOKIM) collection. The author has also established the Migration Special Interest Group with the UK Oral History Society as a means of bringing together oral history practitioners, community groups, academia and the displaced persons themselves to work together to consider the ethical challenges involved with undertaking oral history with refugees and looking at how projects in this area can be supported and developed. For Refugee Week 2019, UEL hosted a launch event for the Migration Special Interest Group with a number of speakers from the UK and Europe talking the importance of oral history for supporting the documentation of the life history narratives of the refugee experience.

6. CRAFTING RESISTANCE: MOVING BEYOND THE ARCHIVAL DOCUMENT

For Refugee Week 2019, we also hosted an exhibition from our archival collections throughout the week and this included a selection of embroidered handkerchiefs produced by the Stitched Voices Embroidery Group located within the Department of International Politics at Aberystwyth University. The Group had just completed a project entitled `Documenting the Refugee Crisis: Remembering through Embroidery' which aimed to develop and create embroidered handkerchiefs documenting the refugee crisis in Europe utilising different approached to embroidery. Drawing upon the list of all reported deaths of those seeking to reach Europe produced by UNITED for Intercultural Action (Dudman, 2019b) , the Stitched Voices drew on information from this list to produced a visual narrative of these reported deaths through embroidery. The result was a very powerful collection of handkerchiefs which were able to display within the Archive combined with oral histories; documents from our archives and an exhibition of individual narratives of displacement.

The use of textiles as an alternative means of documenting the migration and human rights narratives as an interesting one. This was first brought to the author's attention in January 2018 when the Refugee Council Archive hosted an exhibition co-ordinated by the Chilean diaspora in London and entitled, *Crafting Reliance: The Art of Chilean Political Prisoners.* This exhibition brought together over 150 had crafted artworks of various types created by Chilean political prisoners whilst in detention. Many of these prisoners subsequently fled Chile to become refugees ensuring the survival of their art and craft works. The Crafting Resistance exhibition challenged the idea of political prisoners as being 'passive victims' which fails to recognise the degree of agency many prisoners retained despite the terrible conditions endured during the military dictatorship of General Pinochet in Chile (1973-1990) when hundreds of political prisoners were held in concentration camps throughout the country. In several of these detention camps, prisoners organised themselves and crafted items from the very limited materials and improvised tools available to them. The exhibition brings together a collection of these artefacts and reflects on their importance in relation to sustaining the mental health and wellbeing of those incarcerated.

The story of the military dictatorship in Chile under General Augusto Pinochet between 1973 and 1990 is a history detention without trial, forced disappearances, torture, enforced exile and numerous human rights violations. Chile during these years become a country governed by fear and repression. However, whilst those in detention often produced the delicate objects included in the exhibition as both a passive form of resistance to the military junta but as a means of documenting their experiences. Outside of the detentions, a different form of representation and documentation had taken shape in the form of *Arpilleras*, an embroidered wall hanging or tapestry used to depict daily life in Chile under the dictatorship and to document the human rights violations undertaken by the regime. (Agosín, 1987; Eshet and Agosín, 2008). These *Arpilleras* where originally produced by a group of Chilean women who came together in the Chilean capital Santiago, with the help of the Vicarate of Solidarity, an organisation established by the Catholic Church in Chile, that was particularly concerned with the human rights abuses being perpetrated in the country following the overthrow of the socialist government in Chile. Initially these tapestries were created as a means of the women being able to sell them in order to raise the extra money needed to take care of their families, as for many, their male relatives have either been imprisoned or disappeared. However, the *Arpilleras* were soon to develop a new role as descriptors of the oppression within the country that could then be smuggled out of Chile as a means of documenting the abuses of the military regime to an international audience. We were fortunate to be able to included a number of *Arpilleras* within our archive exhibition, and together with the objects created by Chileans in detention, combined with documentary evidence from the Refugee Council Archive exploring the international response to the Chilean dictatorship, the exhibition was able to provide a powerful combination of narrative methodologies and to explore creative voices of expression beyond the traditional report or news story.

Running in conjunction with the exhibition, it was also possible to run a series of embroidery workshops run by second-generation Chileans based in London looking at how embroidery and craft work can be utilised as a tool of resistance to both human rights violations today but also as a means of reflecting on the past and presenting an opportunity for engagement with different modes of expression. The inclusion of textiles, whether in the form of handkerchiefs or *Arpilleras*, signifies that if we are to move beyond the established criteria of the document or oral history as a means of documenting life history experiences, we need to approach alternative creative modes of expression that participants feel comfortable with. Innovative and creative methodologies have a

great potential to reach out to people beyond the academia and to engage emotionally with people on different levels, and to illicit a more engaged response to the stories we are trying to tell. However, `if we are to undertake creative approaches, we should use the methods that participants themselves would use if they wanted to disseminate information that they think is important.' (Ozkul, 2019).

This has been our goal with the Living Refugee Archive Portal to develop a resource to include contributions from refugees and communities, archives and related groups in order to become an important space to learn, share and exchange memories and narratives of the refugee experience. This reflects the importance of encouraging participants to `share personal experiences, insights and `counter-narratives' that may not yet be included [with]in `mainstream history', [encouraging] a far more inclusive and accurate history of the United Kingdom.' (*Refugee Week 2013 Evaluation Report, 2013*). Through the website it is hoped there will be engagement with both traditional and creative forms of representation, but new creative methods of presenting the testimonies of migration is vitally important, to `help disrupt stereotypical representations of refugees and asylum-seekers , [and] emphasising the extent to which historical processed inform current ideas.' (Sunga, 2019). Issues of how we collect, preserve and make accessible the testimonies of under-represented communities whether online or in the archive continues to be a key issue that needs to be addressed, both practically and theoretically within archival science.

In a panel for the Archives and Records Association annual conference in 2016, entitled `Inclusivity meets `History of the Present': Living history, ethics and the role of archivists in documenting under-represented communities,' Dr. Anne Irfan utilised a case study of her doctoral work on the Palestinian refugee which `typifies many of the problems surrounding the collection of testimonies and records of marginalised communities.' (Irfan, 2016). This presentation highlighted several juxtapositions within the Palestinian refugee situation. Their statelessness has resulted in serious repercussions in how their individual and collective narratives are documented, and with the absence of a national archive institution to document their narratives, Irfan argues they are dependent on others to speak on their behalf and to showcase their stories, meaning `that the risks of silencing and misrepresentation can be great.' Irfan also argues that here is a clear structural disparity centred around how the testimonies and experiences of the Palestinian refugees located with the refugee camps are gathered, whereby the researchers in question are often privileged Western citizens pursuing careers of choice, while those being researched are marginalised, stateless and formally powerless (Irfan, 2016).

The oral history work we have undertaken through our civic engagement project at UEL entitled *Democratic Access or Privileged Exclusion* also touched upon very similar issues in relation to both the ethics of researcher engagement with refugee and displaced communities and how the role of such fieldwork can respect and promote the agency of refugee communities, whether based in refugee camps or as displaced persons within a host community. It was an important part of the ethical process that we undertook as part of our project that we wanted to engage the participants we interviewed in the actual research process, so they felt they had an actual investment in the project, and that they would be able to see and influence the outcomes of the research. For many research projects and fieldwork activities with marginalised groups, it is sadly often the case that the results of the research are never shared with the participants who contributed, which can lead participants [Imad reference]. It also helps to encourage an examination of the relationship between refugees and archival collections and how the nature and form of record-collecting can better represent the voices of refugees (Irfan, 2016).

7. CONCLUSION – OUR ROLE AS ARCHIVISTS

We as archivists, must continue to be aware that we `wield power over those very records central to memory and identity formation through active management of records before they come to archives, their appraisal and selection as archives, and afterwards, their constantly evolving description, preservation, and use.' (Schwartz and Cook, 2002, p. 2). The epistemological framework, especially within the UK, can be traced back to the work of Sir Hilary Jenkinson and his seminal work on archival theory, *A Manual of Archival Administration.* Jenkinson employed a positivist ideology to develop what were to become the core facets of archival theory that dominated the nature of archival science throughout the Twentieth Century. The notions of provenance and original order helped to establish the archive as being the bastion of impartial truth, where the archivist could aspire to the physical and moral defence of the core attributes of the archive, namely impartiality, authenticity, reliability, evidentiality, integrity, truth and trustworthiness. The archivist would become the passive custodian of the archives within their care, which would accrue naturally over time reflecting the functions of the institutions to which the archive belonged. It was the role of the archive's creator to define the archive, and not the role of the archivist to actively engage with the development of the collection, and an interference could be seen to endanger to the integrity of the archive.

Archivists need to understand and accept that in the course of their work, they are the instruments of power within their archive. Consequently, archivists should be open to listening out for the voice of the marginalised at every stage of the archive, and to be open to embrace the concept of `otherness' within the archive. From the process of appraisal, to through cataloguing and description and the writing of finding aids, archivists should listen out for these hidden voices, are can be marginalised by the prevailing relations of power. However, we must also be aware of the dangers of wielding our power as archivists to talk for the marginalised, `how to avoid the danger of speaking for those other voices? How to avoid reinforcing marginalisation by naming the `marginalised' as such?' (Harris, 2002, p. 86). The archivist must consider both these approaches to effectively manage the cultural heritage within their care and the multitude of mainstream and marginalised voices archival collections contain. We need to be aware of the needs of our communities, and the opportunities that archives offer to them.

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ARCHIVAL SCIENCE AND IMPACTS OF SOCIAL CHANGES TO ARCHIVES/ARCHIVAL SCIENCE

Abstract

Archives as definition is a collection of historical documents or records providing an information about a place, institution, or group of people. All the information that archives provides are recognized as a national memory, at the same time these information do not refer only to physical records but also include electronic records. The author discuses about archival science and different ideas or theories and views. The paper gives the overview over the issue, how the society recognizes archival science through certain period of time and what impact had social changes on the archival science, especially in Oman. Furthermore, paper focuses on challenges that include new regulation of accessing the archival record in various countries, the introduction of further education that has modified and improved archival science discipline to educate modern generation scholars on how and why they create archives. The author discusses the emerging the network-based information and communication system and what and necessary changes affecting dealing with records.

Key words: *archival science, social changes, digital records, archives*

1. INTRODUCTION

Archival science is the theory of or study of evaluating, preserving, storing, and cataloging recorded materials in documents, recordings, and information storing devices. Data that is stored in archives is the information that is not intended to change. For one to build and minister an archival record must need and evaluate the verified materials. Reliability, integrity, and usability of data make archival materials be preserved and understood as a historical document. The records are expected to represent the activities they were meant for, verify what they claim to be, and present the image of archives through a collection of content (Barry, 2010).

Records emerged already in ancient times, firstly by recording on the rocks, so we find the rock art as the earliest records system. This type of records helped human to discover and understand the activities and worshiping through time. It also recorded how climates change have extinct from planet earth or from parts of it. Many evidences were found in East Oman from the period of early 780-130.000 years ago.

Historically, archives have existed for many years; we can say because more of the archival paradigm rather than the library science, since by adding the different elements it became archival science. Since then, archival science has much extensively developed mostly in the nineteenth century. By then, the study approach of modern scientific history and legal concepts of evidence was influential to archives. The consequences of this interference led most archival societies operating with public data centered and concentrated on making modifications of principles for archival description and arrangement consistent with the privacy policies of those societies. That situation accentuated the real nature of archives and the conditions of their formation. According to Ataman (2009), the community that practiced manuscript and some national records choose to follow bibliographic practices of control of the subject.

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However, in the twenty-first century, archival science have drastically changed as much as apprehensive. As far as history is concerned, archives have gone through significant changes as well as facing many tests along the way. The challenges have impacted archival science and its practices too. Even today, archival science is still experiencing changes and new problems. The most important cause of this challenges is occurred generally in the social changes, being more precisely change in communication practices of communities such as the latest technology, development, and spread of new information (Barry, 2010). In the end, the reason of archival science has raised questions. For instance, currently system based information and communication services have succeeded over data processing task earlier carried out by archival science, then the item that is still hanging around is that what want does one have with archival institutions and historical or traditional records. Is to keep the information available according to the retention schedule in order to enable the researcher and scholars to identify?

2. IMPACTS OF SOCIAL CHANGE TO ARCHIVAL SCIENCE

From the 1980s the community of archives such as national and international community has testified unusual professional move. It is a fact that in the course of development, archival science has advanced from auxiliary science to become a new discipline, and it is becoming a science taught in the Universities and colleges. Moreover, organizing conferences and seminars in this particular study. The following are several social changes to archival science:

Archival science and records have become critical to society. Firstly, with the development of new information society, people are creating further information and records more frequently than before. The original files are being generated through the use of an electronic system , mobile phones and computers, and the internet. Following the new technology, a new arena of archive and record making are available for multiple users and uses (Keough and Wolfe, 2012). people are using the systems from a distance and that created awareness to the society.

Another essential feature that has led to the development of archival science has been the introduction of a new legislation in several countries that allows freedom of information, which has led to the right to use records instrumental governing public none elective government officials and politicians. Moreover, cloud computing has revolutionized the way of institutions to do business. Many benefits in this service for institution's and societies.

Furthermore, because of new regulations to access the files, there has been a major change in way how archival science is being implemented in various countries. Back in days, the users of archives were historians, people were seeking documentation of rights of possessions, and academic researchers. In the new era reasonably large part of the community requests most specifically in municipal archives are from groups and individuals seeking for documentation of past public neglect and discrimination or persecution (Hutchinson and Weller, 2011). The new era has made archivist progressively understand that archival science is a collection of memories rather complete and trustworthy as they have believed before.

Social change has led to archival education, which is new in various countries. Traditionally, one practiced and learned procedures and techniques with close supervision from a colleague or archivist or invigorated to some of the professional stored records. With the new social changes today, this is regarded as not sufficient for archival professionals. The previous curriculum of archival education has been revised

to form a program that qualifies archival professionals to work both in institution and administrations depending on the quality of science in the archival discipline (Huvila, 2015). The changes have prompt development of a simple program to provide students who are willing to follow archival regimen with an extensive comprehension of archival science. Dealing with archives means both, a system and a social phenomenon. This program is detailed to focus on community functions of archival science and records, to provide the students with how and why documents are formed as proof of transaction and actions by creators of records. In Oman, archival science was not known very well in public as much as it deserves, but after the establishment of National Records and Archives Authority and introducing and entering this science into the universities and colleges, the intensification awareness of the institutions and the community took another direction quickly and brought clear and growing interest in it.

The societal change over the last four decades has moved the archival science professionals into new archival administration and institutions. Most importantly, in collective positions. One of the causes of this is the increased ethical issues in society; two decades ago, this was not an issue at all. Today all record managers play a vital role associated with the new societal responsibility of archival science. In today's community the social changes have entirely changed how archival science work, are not only formed to be administrative resources for archivists but are formed to help and serves as transparency resources; answerability and democratic governing of states, to make documentation and ensure safety rights of the community and lastly be a property of falsifiable facts of the previous duration (Huvila et al., 2008).

However, the emergence of digital technology has challenged classical archival science. The real understanding of these new models are scarce to make a description of the systems record keeping and electronic appearance of records; This is the reason that has led to the replacement of classical archival concepts and some re-interpreted by only more existing models. An example of this is the unique traditional notion of records. It is unique because there is only one written document. This document contradicts newspapers, books, and journals that people use. What makes archival documents or records being unique is their nature, which exists and the individual transaction and activity they are claimed to offer rather than the unique character of the record (Hartley, 2010).

Archival science, in general, is extensively experiencing the changes of our times. New documents of storing data have emerged, such as databases. These databases have no individual states, unlike the archival records, the information to be is stored in them is constituted by the data and together with a series of actions of obtaining the results from the data. The emergence of these databases came about because of the transient information reflecting the community's everyday communication such as large volumes of tweets and emails forcing archival science to face up new challenges (Huvila, 2015). Since archives have no concepts to make a selection of data based on merit, the databases took advantages of this factor and analysis large volume of information and made a selection as required by the data users.

3. CONCLUSION

Material change such as technology, development, among others, has made archival science undergo extensive development of the last three decade. Today's archivist has increasingly become societal actors that have been placed between the records, administration the netizens asking for documentation and broader society. The emergence of a new type of documents, an exponentially increasing number of born-digital data to be preserved, along with changing anticipation of users, on the contrary, comes with new challenges to both archival science discipline and archival scholars (Huvila et al., 2008).

To some extent, the gap between archival institutions and users have been rapidly growing as earlier, the more individual and collegial association between archivist and researchers is being substituted with casual and many, and different associations as well as the more expanded audience (Ataman, 2009). Several users of archival holdings visit archives in specific cases, for instance in a situation where the material or item in seek has not been digitalized, or if they require individual consultation in the course of study and investigation.

Archives as definition is a collection of historical documents or records providing an information about a place, institution, or group of people. All the information that archives provides are knows as nation memory, in the same time these information does not restrict only for physical records but also include electronic records. There are many theories in archival science but we have to provide an overview. It should be read as one science with different ideas or theories and views. The society was not recognizing the importance of archives so it did not keep the documents, photo, or any other archival materials, but they dispose them after certain period fear of attracting insect, dusts or pests. On the other side a few people recognizes the importance of this. However, the government institutions before organizing the archival management was not having a specialist in archival science, we were able to see accumulating document at organizations regardless the fact are they valuable or not valuable for nation memory and their disposal in random manner without any regulations until archival science organize this process. Around 7% of the governmental documents transferred to National Archives were forms as national memory. The discipline of archival science has extensively been affected by social changes. Some of the changes have affected the subject positively and others negatively. These changes pose new challenges to archive professionals not only because they change the data of the archives but also to modify the ideas about the data and its place in the new community and culture. Some of the most focused challenges include; the changes experienced in the new regulation of accessing the archival record in various countries, the introduction of further education that has modified and improved archival science discipline to educate modern generation scholars on how and why they create archives. Increased ethical issues that have prompted how archival science work in the society, the creation of new information frequently that has become impossible for archival science because of its voluminous data. Finally, the emergency of network-based information and communication system; digital data that has forced out a new way of preserving and storage of data. From the impacts of social challenges on archives, it is suggested there is a big need to keep files in existences by reinventing the discipline to adjust to the changes in the new generation.

All the claims elaborated in this paper indicate the positive and the negative impacts of social change on archival science. However, as far as changes in society still emerge, that does not mean that the community should discard archives or go away with them. This means archival science discipline should recreate itself to make adjustments to the changes in society. If corrections are not made according to the demand of the new era, the memory preserving institutions they will find themselves in a collection of the archival tradition of the past.

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Tatjana Hajtnik[1]

DIGITAL AGE: TIME TO TRANSFORM OF PUBLIC ARCHIVES

Abstract

In this paper, the author points out that the challenges of long-term preservation of digital records are giving the public archives the inevitable requirement of revolution in their archival practice. The author believes that digitalization and digital transformation are not something that only companies should be thinking about, so they could be as efficient and competitive as possible, but the author believes that the time has come when public archives also need to rethink their business processes. In the paper is thus briefly presented the evolvement of public archives during the different periods of social and technological changes. It presents that public archives can also be transformed into modern digital archives using existing digital technologies.

Key words: digitalization, digital transformation, digital technologies, digital archival records, Slovenian Public Archives, e-ARH.si

1. INTRODUCTION

Public archives are of particular importance in all societies because their key mission is to preserve our memories. The records they collect and preserve are used to understand the past and the present easier, and on that basis to choose the direction into the future. For this the precondition is, of course, that the records are safely preserved, which means that they are accessible and usable all the time. The exponential technological development we have been witnessing in recent years results in a changed way of social life. Not so long ago, the records that were created in all spheres of society and which public archives were accepting for preservation and use, were tangible; those were boxes of paper documents, photographs and maps. Modern digital technologies, as we experience them today, are changing the way of creating records. They are becoming digital, and digital technologies are changing the way of their use and, above all, their quantity, which is growing exponentially. Advanced technologies allow us to store every email and practically any other type of digital record we create, since the storage space is not a major problem anymore. This leads to the accumulation of large quantities of digital records, including their duplication, and thus the non-transparency, the inability to search for them quickly and many other risks. Records originally born in digital form can have multiple copies in multiple versions, stored in several different locations, preferably under different names and in different formats. A similar example is found in institutional collections. There may be more than one author of digital records in one research, they may be stored in different repositories in different versions (for example, working version, published version). Versions may be inconsistently labelled in different digital repositories, and there is a risk that changes of one version will not be transferred to all versions in other digital repositories. This also increases the risk of data loss and undermines the authenticity (credibility) of digital records.

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When talking about digital records, it is not fully clarified, unlike of paper records, what record presents the original (Hajtnik, 2017). In addition, large volumes of records are being digitized[2], especially for easier and faster use. This may also mean that we might have the same record stored both, in physical and digital form. More often, however, we have files where we have some records in physical and others in digital form. In this case, we are talking about combined storage, which again requires different approaches and procedures, from taking such records to storage, the way how to store them, as well as the search and further use. An additional problem is the fact that not all digital records are in a presentation form that is easy to understand for humans. In this case, it is necessary to decide how the records will be processed and prepared for future use, while taking into account the technical capabilities of the end user. The diverse nature of digital records (document formats, email, multimedia, data set, code) and the different technologies, which help users to access and use digital records (from desktops to tablets and smartphones) are creating additional challenges.

On the other hand, regarding on today's level of technological development, users expect that services for accessing and using digital archival records are intuitive, transactions simple and results immediate.

For public archives all of this represent new challenges. These are connected to the making the decision, which digital records to keep and how to keep them safe so that we can find exactly those records that we need at any time.

> *The time has come when public archives also need to provide services that keep pace with the growing expectations of users, as well as with changes in the way of accessing and using records. The ability of public archives to preserve and to offer for use authentic records, regardless of their format, will determine what evidences will be available in the future to our descendants, in comparison with today.*

Since their constitution, public archives were adapting to social and technological change all the time and were subject of various forms of transformation at different times, either for social requirements or for their own needs. They will not be able to avoid this neither in the digital age that we are currently living in. Inversely, now the time has come when they need to think about how to transform and digitalize their processes using the latest digital technologies such as cloud computing, internet of things, 3D printing, artificial intelligence, robotics, mobile technology, social media and others.

2. PUBLIC ARCHIVES IN TIME OF SOCIAL AND TECHNOLOGICAL CHANGES

About ten thousand years ago, when the first radical change in our lifestyles took place, domestication of animals allowed the transition from working on the field to agriculture, the social changes started. The agricultural revolution brought together the power of humans and animals for the purpose of production, transportation and communication. In the spirit of the people's saying, "the nation holds the evidence," societies have recognized the value of public charters at various times, from the ancient Greeks and Romans with their archeion[3] and tabularium[4] through the middle and new ages until the 18th century, when a series of industrial revolutions followed the agricultural revolution. In the Middle Ages, until the rise of cities in the 12th century and the increase in commerce, there were few documents, but the ancient tradition of archiving did not remained, and many doc-

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2   Conversion and capture of records originally produced in physical or electronic analog form into digital form.
3   *Archeion* is the Greek name for the archive.
4   *Tabularium* was the official archive of ancient Rome, and housed the offices of many city officials

uments were also regularly destroyed. With the exception of the papal archives, where the most important records have been preserved, also some evidences of the rights of individuals and institutions has been preserved. In the 16th century, due to the increased volume of records, they introduced the registry books were solved files were registered in chronological order, while older records, which were no longer relevant to the day-to-day business, were filed in the archives. In the meantime, appeared a new profile of an official - an archivist, who was employed by the government and was exclusively taking care of the old records. At the beginning of the 17th century a new type of archives appeared, so-called a secret archives[5] that was centrally organised and closed for the public.

2.1 THE FIRST INDUSTRIAL REVOLUTION: the first modern archives and the term of cultural heritage

The **first industrial revolution**, which has been running from 1760 to 1840, was launched by the invention of the steam engine and the beginning of the construction of the first railways. During this time, the first steamships were made, the first factories were build, all this led to machine production, man begins to exploit the power of machines. During the first industrial revolution, from the secret archives the **first historical archives** were developed, which slowly became overcrowded, as they also kept for the state administration irrelevant records. The archive has finally separated from the registry office, from the treasury of rights of the state it was becoming increasingly a treasury of historical resources.

*During the first industrial revolution, the **first modern archives** was created, integrated into the state administration and accessible to the general public.*

Interest in historical research work has increased, and as a consequence also the required knowledge of archivists increased. This led to the creation of the first schools of diplomatics[6] and other auxiliary historical sciences in the first half of the 19th century, including archival science as a science of arranging and maintaining archival records. In 1831, the first regulation of non-destroying the old records was adopted. According to the law, the Archive began to take over the records of the institutions that were still operating.

*The term of **cultural heritage**[7] emerged, which also considered the archival records.*

2.2 SECOND INDUSTRIAL REVOLUTION: First archives in Slovenia

The second industrial revolution happened in the late 19th century and continued into the early 20th century. It was based on the discovery of electricity and the invention of the conveyor belt, which result the beginning of serial production. It marked a turning point, as the internal combustion engine took over the role that previously had the steam engine, invented was the first telephone and with this the transmission of speech, the phonograph as a turntable precursor, a light bulb was patented, the world's first car was made and a wireless telegraph system was established. All this lead to rapid industrialization, progress in transport and communication between people.

*In the late 19th century, i.e. during the Second Industrial Revolution, the **first archives in Slovenia** were created. They represent institutions for the ingest, storage and preparation of archival records for use.*

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5   The oldest **secret archives** were created in Prussia (1610) and the Vatican (1612). Established in 1749 in the Habsburg Monarchy, it employed officials and individuals to take over the material of the abolished offices. (Wikipedia, 2019a).

6   **Diplomatics** is an auxiliary historical science that examines charters. Based on the language, style, font and materials used, it determines the origin, author and authenticity of historical records.

7   **Cultural heritage** is a property inherited from the past, defined by the community as a reflection and expression of its values, identities, religious and other beliefs, knowledge and traditions. (Delak Koželj, 2009).

2.3 THIRD INDUSTRIAL REVOLUTION AND THE TRANSITION TO THE INFORMATION REVOLUTION: The First Slovenian Archival Law

The third industrial revolution began in the 1960s. The breakthrough was caused by the automation of production due to the development of electronics and computer science, the use of mainframes in the 1960s and personal computers in the 1970s and 1980s. Major changes began with the development of mobile telephony and the rise of the Internet. Together, however, in the form of different social networks, the social standards and relationships between people have completely changed. In the late 70's, the information revolution began, triggered by a marked transition from the industrial to the information age. This period is characterized by an exponential increase in new information and communication technologies (hereinafter: ICT) in microelectronics, computer science (hardware and software), telecommunications and optoelectronics. The mode of communication began to change profoundly, processes became faster and more powerful, and paper records started to be replaced by digital records. The company is becoming more and more an information society, its main feature is being e-commerce and computerization of business.

> *During the third industrial revolution, in the late 80s and in early 90s of 20th century, **Slovenian public archives realized the first computerization of one part of their business**. For the purpose of describing archival records they began to use specially developed software.*

2.3.1 First Archival Law

> *At the time of the information revolution, **the first archival law** was introduced in Slovenia - the Law on Archives and Archival records (1997, hereinafter: ZAGA), which **defined current[8] and archival[9] records** as a **cultural monument.***

ZAGA determines that archival public service in Slovenia is performed by The Archive of the Republic of Slovenia, regional archives[10] and archives of local self-governing communities. In addition to regulating the protection of archives, it also lays down the conditions for its use and the jurisdiction and duties of public archives.

2.3.2 Legal basis for e-commerce

When the National Assembly of the Republic of Slovenia adopted the Electronic Commerce and Electronic Signature Act (hereinafter: ZEPEP) in 2000, Slovenia also received legal bases for e-commerce. Under special conditions, the law recognized the e-signature with the same validity as in the paper world. Along with several other regulations[11],, it mainly set out e-commerce procedures, conditions regarding availability and suitability for later use, and only partly the procedures and requirements for the retention of digital records.

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8   *Current records* are files, charters and other separate records, official books, files, charts, plans, posters, pictorial records, film, sound and other undefined records, regardless of the format of information or the form of its media and digital or analog formats of computer processing along with the software. (ZAGA, 4. člen).

9   Archival records are original and reproduced (written, drawn, printed, photographed, filmed, photographed, magnetic, optical or otherwise recorded) current records received or created in the work of legal or natural persons and has a lasting importance for science and culture (ZAGA, 2. člen)

10 The Republic of Slovenia becomes the founder of the Historical Archives in Celje, the Regional Archive in Koper, the Historical Archive in Ljubljana, the Regional Archive in Maribor, the Regional Archive in Nova Gorica and the Historical Archive in Ptuj with the entry into force of ZAGA.

11 E.g. General Administrative Procedure Act, Administrative Procedure Regulation, Judicial Order.

The technological possibilities and legal underpinnings for e-commerce have led to an increasing amount of digital records, and consequently many issues and challenges. Technology was evolving at an unprecedented rate, hardware and software were rapidly becoming obsolete, and so the question what will happen with digital records after ten, twenty or several hundred years arose. An important fact brought into the Slovenian legal order by ZEPEP was that digital records have evidential value and legal validity. The condition is, however, that they must be kept in a way to be always accessible for the future use, in their original form or the form, which represent them as authentic, and the time of their origin can always be ascertained, and that the technology does not allow changes or deletion of the data. However, the provisions of ZEPEP were not sufficient to comprehensively regulate the preservation of all types of records, as they apply only to those records that were created and also stored in digital form and were not subject to any specific preservation conditions. In doing so, ZEPEP provided a legal basis for the evidential value of a small amount of the records that various organizations encountered in their operations. Authorities and courts were thus, e.g. in most cases, requiring from clients to provide the original record in physical, non-digital form.

2.4 FOURTH INDUSTRIAL REVOLUTION: New Archival Regulations and the New Role of Slovenian Public Archives in Society

By the transition to the new, 21st century, there is the fourth industrial revolution, which is building on the foundations of the information revolution. It is characterized by artificial intelligence[12], robotics, the Internet of Things, autonomous vehicles, 3D printing, virtual reality, nanotechnology, biotechnology and quantum sciences. This began to fundamentally change our lives and transform society, the economy started to be global. The exponential growth of computing capacity and the availability of large amounts of records have begun to foster the impressive advances in artificial intelligence. The fourth industrial revolution is often referred to as Industry 4.0. The term signifies the transition from the already established automation and robotization to a completely new era, characterized by the complete digital integration of business and production processes throughout the supply and sales chain. It integrates mostly known technologies from complex business analytics and artificial intelligence to the connection of physical systems and machines through the Internet of Things. These technologies indicate the development of brand new production and organizational concepts.

2.4.1 New archival regulations

*With the beginning of the Fourth Industrial Revolution coincided in 2006 the **adoption of a new archive law**, the Law on the Protection of Documentary and Archival Material and Archives (hereinafter: PDAAIA). It extends the definition of **archival records**[13] from the cultural heritage only to also the **means of ensuring the legal protection of individuals**.*

PDAAIA extended the protection of records in physical form to the protection of digital records as it regulates the manner, organization, infrastructure and performance of the capture and storage of such records, including the legal effects of such storage. In addition, it arranged:

- the legal system for digital records[14],

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12 Kaplan and Haenlein (2019) define artificial intelligence more precisely as "the ability of a system to interpret external data correctly, to learn from such data, and to use this new knowledge to flexibly adapt and achieve specific goals and tasks."

13 PDAAIA, Article 2.

14 PDAAIA, Article 31.

- information systems for the long-term preservation of digital records,
- destruction of originals after conversion to digital form[15],
- transfers of digital records to new, standardized media and conversions[16] to new formats that are generally suitable for long-term storage, and
- accessibility and conditions of use of digital records.

Since digital records can not be preserved in their original form in the long term[17], as is the case with paper records, PDAAIA also allows the preservation of digital records to preserve equivalent and authentic reproductions of records instead of the previous exclusive preservation of original material.

2.4.2 The new role of Slovenian public archives

*During the fourth industrial revolution, **Slovenian public archives are given a new, important role** as a regulator in the field of long-term preservation of digital records in Slovenia.*

In order to preserve digital archival records, PDAAIA requires from their creators to adopt internal rules[18] in the form of an internal act for managing these records at all stages of their life-cycle, from creation to storage. It entrusted the Archives of the Republic of Slovenia with the important task of reviewing these internal rules and confirming their compliance with the regulations. The validity of digital records can already be recognized by law on the basis of such approved internal rules and their demonstrable implementation. In addition to regulating the legal validity[19] of preserved digital records, PDAAIA also establishes a legal framework[20] to provide an efficient information infrastructure that can support the capture and storage of all types of digital records. It also introduces legal control of the market for information and communications technology providers and associated services for the purpose of capturing and storing digital records. The supervision was entrusted to The Archive of the Republic of Slovenia, and in the field of qualification of persons who work with current and archival records also to other Slovenian public archives.

At the time of the fourth industrial revolution, in which organizations were accelerating the use of digital technologies to digitalization[21] their business processes and, as a result, creating more and more digital records, another important task was assigned to the Slovenian public archives by PDAAIA. This is the preparation and adoption of uniform

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15 PDAAIA, Articles 13-16.

16 PDAAIA, Articles 28-30.

17 PDAAIA long-term preservation of digital records as preservation over five years (Article 11).

18 PDAAIA, Article 18. More about internal rules and other instruments for ensuring the long-term preservation of digital records in this guide: Hajtnik, T., Škofljanec, J., Zupančič, M., Mrdavšič, A., Vodopivec, J., Dobernik, M. (2018). *Nova arhivska zakonodaja in praksa : arhiviranje, hramba in upravljanje dokumentov za podjetja in ustanove.* [Spletna izd.]. Maribor: Forum Media, 2018 - .

19 PDAAIA, Article 31.

20 Supervision includes mandatory *registration of providers* PDAAIA, Articles 83 and 84) of equipment and services and the possibility of *additional certification of registered equipment and services* (PDAAIA, Articles 85 - 87).

21 The term *"digitization"* encompasses the creation of a digital record (e.g. in electronic form as it exists on a computer) from a physical record e.g. from a digitization paper. Regulation on Current and Archival records in Article 13 defines digitization as "Any form of digitization is considered to be the conversion and capture of current and archival records, originally created in physical or electronic analog form. The term *"digitalization"* refers to the automation enabled by digital technologies. Efficiency can be increased if digital technologies allow previously separate processes to be connected and integrated, thereby reducing production costs and creating opportunities for new customer experiences (for example, allowing customers to access an online catalog). Generally, these services typically enhance or accelerate an existing business without changing its fundamentals.

technological requirements[22] (hereinafter: UTR) in the field of providing long-term storage of digital records. Their purpose is to prescribe in greater detail the scope and implementation of the stages of preparation or organization of the capture and storage of digital records. Following these requirements is binding on all public sector organizations and for businesses seeking legal recognition of their digital records.

3. DIGITAL SOCIETY: NEW CHALLENGES FOR PUBLIC ARCHIVES

Going back to the Fourth Industrial Revolution. According to Schwab (2016), the speed of its development, in contrast to the industrial revolutions, has been developing at an exponential rate and not just at a linear speed in the past. He attributes this to the complex and strongly interconnected world we live in, and to the fact that the emergence of new technology contributes to the development of newer and more powerful technology. Related to the Third Industrial Revolution, digital technologies based on computer hardware and software and networks are becoming more sophisticated and integrated and, as a result, they are transforming society in all spheres of its operations. In the fourth industrial revolution, new technologies and widely used innovations are getting introduced much faster and more extensively than in previous ones, which have not yet been fully completed in certain parts of the world. Today, instead of talking about the digital society, computerization has been replaced by digitalization, and the need for organizations to digitally transform[23] business comes to the fore.

Here, we will not highlight all the benefits, opportunities and challenges that a digital society brings. In the following, we will start from the fact that the way of work and communications is changing due to the rapid technological development, working with digital records and databases is replacing the traditional office business, e-mail replaces classic paper mails, paper forms and applications replacing electronic applications. As a result, we are producing increasing amounts of records exclusively in digital form.

> Based on a survey conducted, International Data Corporation has predicted that the global data sphere will grow to 163 zettabytes by 2025 (Reinsel, Gatz & Rydning, 2017).

This is ten times more than the 16.1 zettabyte of data created in 2016. However, the amount of digital records is not even the biggest problem, since today, the storage of digital records does not require so much expenses as did years ago. The bigger problem is that these records are being lost on a daily basis, both by their creators and by public archives (examples: Holehouse, 2019; Ahiers, M.M & Quijano, E., 2009; Sierman, 2019). Gemalto[24] (2019) states that 14,717,618,286 records were lost or stolen since 2013 (Fig-

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22 The Archive of the Republic of Slovenia adopted and published the first uniform technological requirements in 2006 on its website, now version 2.1 applies. (available at http://www.arhiv.gov.si/en/laws_and_documents/) (July 20, 2019). The 2014 edition of PDAAIA upgraded the document with uniform technological requirements into a regulation adopted by the Ministry of Culture.

23 *Digital transformation* represents a complete change of the organization and its business activities, processes, models, strategies and organizational culture with optimized utilization of digital technologies, their changes, opportunities and impacts, taking into account the current state and looking into the future. It does not focus on Information and communications technologies (hereinafter: ICT) and digital technologies, but rather on optimizing business needs through the efficient use of technology. Important levers are raising awareness and promoting digital transformation, innovating digital business models, digital process optimization, developing digital competences and education, internationalizing digital solutions and services, supporting the deployment and integration of business and ICT standards, adapting digitalization to national and EU environments, and promoting entrepreneurship supporting the introduction of new business models.

24 *Gemalto* is a leading provider of digital security solutions in the world, particularly in the area of authentication, verification and data protection solutions.

ure 1), of which 3,353,172,708 records in the first half of 2018 alone, with an average of 72 records per second, respectively 6,189,074 records each day (Figure 2). That number represents a 72% increase over the first quarter of 2017.

Figure 1: Statistics on records lost or stolen since 2013

Source: Gemalto, 2019.

Figure 2: Frequency of loss or theft of records

Source: Gemalto, 2019.

Most of these losses or places are related to social media[25] records (56.18%) and only a small part to public sector records e.g. governmental records were lost or stolen around 0.41%. Man plays a major role in the destruction or loss of digital records, as evidenced by the recent case of deliberately destroying media from the Austrian Chancellery (Dnevnik, 2019).

Using research data from the Society of American Archivists (2017), at least 3-5% of records lost or stolen are considered to have archival value. So there is a huge gap between the amount of records created today that require security and the amount of records that are actually secured, and that gap will widen - this is the reality of our data-driven world. The IDC predicts that by 2025, nearly 90% of all data generated in the global data sphere will require some level of security, but less than half will be secured (Reinsel, Gatz & Rydning, 2017).

Considering that social media posts can also refer to governmental changes and records, individual creativity, the legal order of individual countries, institutions' websites, etc., it can be said they have a profound impact on society as a whole. This can, be however, an important primary source for future researchers. However, in order for them to understand and explore the past, we must also keep these records. However, in the multitude of records published by individuals, organizations and government institutions, it is extremely difficult to predict which of them will be relevant for the future (Hajtnik,

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25 *Social media* are applications, web services, platforms or websites that build social relationships between people based on modern technological solutions (Wikipedia, 2014).

Živkovič & Uglešić, 2015). Either, because of the need for evidence in legal proceedings or for the preservation of cultural heritage. Public archives should therefore ask themselves as soon as possible if and what is the value of the records posted on social media by government institutions, companies, celebrities e.g. policy, public relations specialist. Or, are advertisements, forums or online stores an important source of information about the culture and society of a nation at a given time? They will need to think carefully about what records they should keep and for how long (due to the later need for reuse, as evidence or as written cultural heritage).

3.1 Development strategy and the first beginnings of the Slovenian electronic archives

Years ago, the Slovenian public archives became aware of all of the aforementioned and came to the realization that the situation they were facing requires an immediate approach to finding solutions. They were aware that, despite their different technological options, they did not have an established or basic environment in which they would be able to retrieve digital records from creators and securely preserve them. The first concrete and successful step in this direction was that they managed to establish in 2006 the important basis for the establishment of the Slovenian electronic archive in the PDAAIA. Article 59 stipulates that The Archive of the Republic of Slovenia, together with the ministry, which is responsible for computerization of the administration, provide information and communication infrastructure for record keeping, storage, use of digital archival records, integration of archives into a single information system and connection to similar systems in the protection of cultural heritage.

As one of the main goals in the field of archival activity, i.e. *the establishment of modern internationally an internationally comparable system of professional and legal protection of archival records*, was also set by the Resolution on the National Program for Culture 2008-2011 (Official Gazette of the Republic of Slovenia, 2008). That is very important for the legal security of the country, its institutions and citizens and their rights. Similarly, the establishment of the Slovenian public e-archive as an environment for e-archiving is one of the goals of the eGovernment Action Plan until 2010 (Ministry of Public Administration, 2007). For the realization of this goal was responsible The Ministry of Culture, which means The Archive of the Republic of Slovenia as a body within this Ministry.

Based on the aforementioned regulations and strategic documents, The Archive of Republic of Slovenia, together with foreign experts, in 2008 prepared a feasibility study[26] on the long-term preservation of digital records and the establishment of a Slovenian e-archive.

> Based on a feasibility study, the **Slovenian public archives**, on the threshold of the fourth industrial revolution, have adopted, and the **Government of the Republic of Slovenia has also approved, the first development strategy of the Slovenian e-archive** (named e-ARH.si) for the period 2010 - 2015 (Ministry of Culture, 2010).

The Slovenian public archives have strategically decided to establish a joint e-archive on their own information infrastructure and in its direct management. The decision was based on the assessment that such a solution is more economically justified than if each archive set up an e-archive for itself, and is the only feasible way regarding the given resources of individual archives, especially financial and human.

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26   Original title: Feasibility Study LTDP – ARS: Feasibility Study for the Implementation of a Long-term Digital Preservation (LTDP) System for the Republic of Slovenia; based on Article 59 of PDAAIA.

However, the state did not provide the necessary financial nor human resources for this purpose. The Archive of the Republic of Slovenia managed to obtain only one tenth of the planned funds for the development of e-ARH.si from the European Cohesion Fund, to which, in accordance with Article 59 of the PDAAIA, it also attracted other regional archives. The e-archiving process was defined in accordance with ISO 14721 standard. The OAIS reference model. This standard deals with e-archiving from the point of view of three important areas (Figure 3). The first relates to the environment where digital records are created, that is, the environment in creators. The second is an environment that is in the domain of public archives, and which preserves digital records taken over from creators. The third area represents solutions that enable users to find, access and use digital records. In each of these environments, a series of processes are taking place that archives wanted to support methodologically and technologically. Given the experience and expertise of working with digital records at the time, and, last but not least, financial and human resources, they were only able to realize the plans of the first strategy partially. The implementation[27] mainly refers to the creation of a software tool for creators to prepare and submit to archives certain types of digital archival records, namely unstructured files and databases. For the long-term preservation of digital archival records, an electronic repository (repository for digital archival records) has been established, represented by an open source software solution and infrastructure at three geographically distanced locations.

Figure 3: E-archiving process according to OAIS reference model
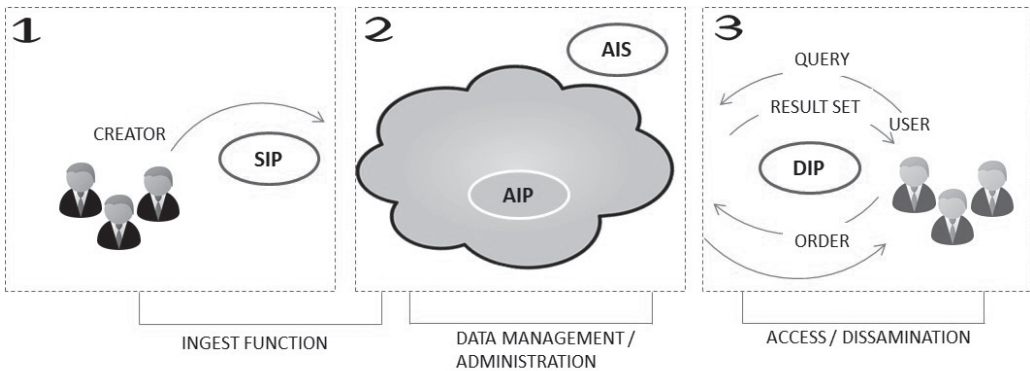
SIP – Submission Information Package
AIP - Archival Information Package
AIS - Archival Information System
DIP - Dissemination Information Package

Source: Author's

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27 More about the realization of the first development strategy of the Slovenian public e-archive in the article Hajtnik, T. (2015). Na poti do slovenskega elektronskega arhiva. V: Volčjak, J. (ur.). *Arhivi na razpotju : zbornik referatov : 27. zborovanje*. Ljubljana: Arhivsko društvo Slovenije, str. 143-152.

3.2 Further development of the Slovenian public e-archive

At the end of 2015, the Slovenian public archives completed the period of the first development strategy for the Slovenian public e-archive. In the meantime, the problem of preserving digital records in Slovenia has also become also the governmental strategic issue in Slovenia. In addition to the benefits and opportunities of digital society, the threats and dangers of digital society have been identified. In the field of cultural heritage, as the opportunity for the digital society was recognized the development of creative content and the creation of new and/or enriched offering of digitized cultural heritage, digitization on the field of education and research, culture and media, and increased production of digital media content. On the other hand, the loss of digital cultural heritage was recognized as a threat to the digital society in the public sector, thus reducing legal certainty and the difficulty of reusing data due to an inadequate system for archiving and preserving digital records.

In response to the perceived threats and dangers of the digital society, Slovenia adopted the Strategy for the Development of the Information Society until 2020, shortly called Digital Slovenia 2020, prepared by the Ministry of Public Administration (2016). It identified key strategic development orientations and integrated strategies into a single strategic development framework. It also included the further development of e-ARH.si, including the establishment of a digital archive for film and other audio/video archival records and of a center for the digitization of archival records.

> All these strategic documents formed the basis for the new Strategy for the Further Development of e-ARH.si for the period 2016 - 2020 (Ministry of Culture, 2016), prepared by the Slovenian public archives, and approved by the Government of the Republic of Slovenia in March 2016.

Particular attention was paid to the access and continued use of digital archival records to all interested users, regardless of their capabilities. The ultimate goals of the development and establishment of e-ARH.si include:

• contributing to the optimization of the basic functions of eGovernment and improving the internal efficiency of eGovernment operations,

• providing and developing a quality management service for Slovenian cultural heritage and, consequently, legal certainty for the country, its institutions and individuals,

• increasing the interoperability of linking public sector basic data sources, thereby increasing access to archives in terms of cultural heritage and legal certainty.

In accordance with the dynamics of the reorganization of informatics in the state administration, the e-ARH.si strategy envisages the placement of certain solutions of the e-ARH.si system in the Government Cloud Computing[28], setting up by the Ministry of Public Administration.

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28 Government Cloud Computing (GCC) is a computing infrastructure for direct budget users, providing them with storage, development, business and other capabilities in the form of services and the ability to achieve quickly their business goals using the concept of cloud computing. The infrastructure is owned and operated by the government and provides services that use sensitive, personal and other data and information that the government does not want to store outside its environment. (NIO, 2019).

Among the anticipated products of the implementation[29] of the implementation plan of the second strategy for the period 2016 - 2020, the Slovenian public archives included, among other things, the digitalization of key phases in the e-archiving process (Figure 4), which replaced the "manual" procedures with automated ones, namely:

Figure 4: Digitalization of individual phases in the e-archiving process
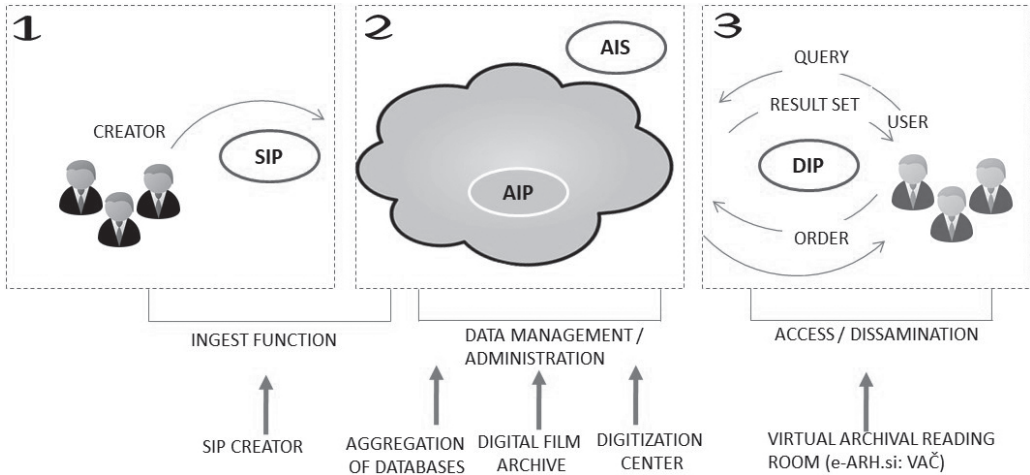
Source: Author's

The process of preparing and delivering digital records from creators to archives (Ingest function)

The Acquisition Process provides the services and functions of receiving submission information packages (SIPs) from creators, preparing records for storage and managing in the archive. Takeover features include e.g. preparation and acceptance of SIPs, implementation of quality control of SIPs, generation of archival information packages. This process, especially the preparation of digital archival records for delivery to archives, has proven to be a challenging task in the past, both for the creators of those records and for archives. It required a great deal of negotiation, coordination and verification. In order to simplify and standardize this process, Slovenian public archives have developed a special software tool SIP Creator, thereby at least partially digitalized the process of delivering digital archival records. The tool enables the creator to organize and list digital archival records for delivery in the form of a pre-defined structure of the SIP and to verify and validate it before being transferred to the archive.

Data Management and Administration process in the archival repository

Aggregation of archival databases: After ingesting digital archival records from creators to archives, those are stored in the archival repository, where their metadata is stored together with the records themselves. In Slovenian public archives, there are two databases of fonds and collections of archival records, which function as their archival information system. The first is the database of The Archive of the Republic of Slovenia, and the second is common to the other six regional archives. The existing solution, from a user standpoint, does not allow simultaneous inquiry in both databases, which is why the Slovenian public archives have identified this deficiency as the absence of a "national content aggregator" for the field of archival activity. One of the strategic goals of the

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29 More about the realization of the first development strategy of the Slovenian public e-archive in the article Hajtnik, T. (2016). Nadaljnji razvoj slovenskega javnega arhiva do leta 2020. V: Hartman, M. (ur.), et al. Doksis 2016 by Media.doc : zbornik. Ljubljana: Media.doc, str. 55-65.

e-ARH.si strategy for the period 2016 - 2020 is also merging the two databases into one database and one web user interface for searching through the single (common) database. In this way, Slovenian public archives establish new organizational, business, information and archival professional solutions.

Digital Film Archive: The Archive of the Republic of Slovenia also receive and preserve film (on film or digital form) and other A/V records. One of the strategic goals of the development of e-ARH.si is the establishment of its own digital film archive as an integral part of the e-ARH.si system. One of its key tasks is taking over film and other A/V records and digitizing those records that are still in analogue form. The entire workflow is supported by special software that enables the preparation, import, review and validation, conversion, labeling, basic manipulation and accessibility of archival film and A/V records and their preservation (short and long term).

Digitization Center: Regardless of the fact that the original form of the paper archival record proves its legal value, it should be borne in mind that over time this form may become unusable. That is why Slovenian public archives have established a digitalization center and equipped it with modern scanners for converting records from physical to digital form. The whole process of digitization is supported by special software. It represents professional technological-organizational procedures for converting contents and visual form of records from their physical to electronic form in order to provide material protection of archival records (protection against damage) and to ensure fast and wide access to archival (cultural) content.

The process of accessing and retrieving archival records (Access / Dissemination Function)

Archives should allow all interested users to access the records they preserve. This process is carried out within the framework of the user service in the archives reading room, which the Slovenian public archives wanted to digitalize. For this purpose, they have designed the concept of a virtual archives reading room e-ARH.si: VAČ. This provides all the key functionalities in support of basic reading processes, such as e.g. user registration, search, ordering, delivering, use of records, control of use and recording and making statistics of use. By allowing digital archives to be remotely accessed, the virtual archival reading room will provide support to different types of users and their needs; from complete archival laymen to advanced archival professionals and technical administrators, including users from vulnerable groups (blind, partially sighted, deaf). Its concept envisages effective ways of automating reading processes and interactive virtual communication and providing archival professional help (Koncilija & Hajtnik, 2018). Technically, the concept of e-ARH.si: VAČ is designed as a modular and technologically sophisticated, constantly evolving, scalable and secure information system.[30]

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30 More on Digitalization of the Reading Process and the Concept of the Virtual Archive Reading Room e-ARH.si: VAČ in Two Papers:

- Koncilija, Ž., & Hajtnik, T. (2018). Koncept virtualne arhivske čitalnice : e-ARH.si: VAČ = Concept of a virtual archival reading room : e-ARH.si: VARR. V: Škoro Babić, A. (ur.). Arhivi v službi človeka - človek v službi arhivov : simpozij : zbornik znanstvenih prispevkov z recenzijo = Archives in the service of people - people in the service of archives : symposium : proceeding book with peer review. Maribor: Alma Mater Europea – ECM, str. 154-162.

- Koncilija, Ž., Hajtnik T., Jenuš, G., Paulič, A., & Pfajfar, V. (2018). Virtualizacija čitalniških postopkov : od ideje do koncepta. Moderna arhivistika : časopis arhivske teorije in prakse, ISSN 2591-0884. [Spletna izd.], letn. 1, št. 1, str. 95-114, ilustr.

We have mentioned only a few archival procedures, which are being updated by Slovenian public archives with the implementation of the e-ARH.si strategy for the further development of e-ARH.si in the period 2016 - 2020, and are now being transferred from the archival practice to the digital world.

4. MODERN DIGITAL TECHNOLOGIES: NEW OPPORTUNITIES FOR SLOVENIAN PUBLIC ARCHIVES

The implementation of the e-ARH.si Further Development Strategy implementation plan has begun several years ago. Digital technologies have improved over the years, and archives have gained a great deal of knowledge and experience in managing digital archives. This is a good basis for their future work, and they will need to adapt their digital work to the development of digital technologies and to use the new technologies properly. Given the characteristic of the digital society, on the one hand, the exponential growth in the number of digital records and, on the other, the expectation and demand of end users to access these records as quickly as possible, the time has come when traditional archives have to be transformed from static repositories of paper and digital records to dynamic service centers that will serve both, end users and professionals within the archives. In doing so, they can benefit from the use of new digital technologies to help them improve the quality of their services and improve their business efficiency. Since public archives have been facing financial and staffing problems since their formation, the overwhelming reason for studying new digital technologies and implementing them is the great potential for savings in business and record management.

By using modern digital technologies, Slovenian public archives will be able to further improve and simplify their work processes and thus provide better services. As soon as possible, they will need to think carefully about what records they should keep and how long, according to their large exponentially growing volumes and their increasing complexity, intertwining, rapid variability and multiplication, e.g. records on websites and social networks. Therefore, the contents of websites and social networks should become the subject of archival professional research and discussion as soon as possible, both from the point of view of their appraisal and the search for a way of long-term preservation, and last but not least, their future use (Hajtnik, 2017).

Digital records can be contextualized, so Slovenian public archives will need to find new opportunities to describe the context in connection with other digital record collections using digital technologies. It will take a transition from a period of silos, fragmented information held by different institutions, to distributed data.

At this point, we must ask ourselves what archival processes could be digitalized using existing digital technologies.

4.1 Digitalization of the process of searching and accessing archival records in physical form in archival repositories[31]

Slovenian public archives currently store well over 70 km of archival records, mostly written records on paper, as well as parchment, microfilm, film and other recording media. These records are preserved in geographically distant repositories. The process of finding the right record in these repositories is complex and, above all, time consuming. In addition, there is a high risk that once the record is taken out of the repository and it is not returned to the same location. On the other hand, it might happen that the files of

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31 *Archival repositories* are properly arranged and secured spaces where documentary and archival materials are stored.

records are not returned completely. All processes of searching and giving the records in physical form to users are manual. The process of searching for records in physical form in an archival repository can be significantly simplified by using different technologies, one of them being, for example. RFID[32] technology (Radio Frequency IDentification) or radio frequency identification. With this technology, it is possible to keep a much more consistent record of archival records, which would reduce the number of "misplaced" records. The point of RFID is actually a sticker paced to each box with archival records. By using RFID technology, it is also possible to inventory records much faster on shelves, as we only "walk" with the reader between shelves. Such a solution can also result in significant savings in staff costs, improving the service of giving archival records for use, preventing the theft and easy checking of inventories, managing the archival depository, while providing archival records for use in expected time. Using RFID technology, it is also possible to analyze large volumes of records and make them available to internal and external users, or systems.

4.2 Machine appraisal and record selection using artificial intelligence tools

As long as the records were only on physical media, usually paper, archivists were completely sovereign in managing them, which begins with appraisal and selection at the creator and continues with acquisition and long-term preservation and further use. Dealing with digital records, however, this is unlikely to be the case (Hajtnik & Škoro Babić, 2018). We estimate that the "manual" appraisal and selection methods used for records on physical media, regarding the complexity and exponentially increasing volume of digital records, will not be easily transferred to the digital environment. Artificial intelligence tools provide archivists with almost limitless possibilities. Machine learning technologies provide archives with radically new abilities and capabilities. The challenges of appraisal, selecting and reviewing the sensitivity of born digital records might only be solved by using artificial intelligence tools.

4.3 Proving the integrity and authenticity of archival digital records using a combination of artificial intelligence and blockchain technology

Due to our priceless value, archival records hold the status of the cultural monument. They are part of current records, which, in addition to their lasting importance for history, other sciences and culture, also have a permanent significance for the legal interest of legal and natural persons. Therefore, one of the key tasks of public archives is to assume the responsibility of ensuring the continued integrity and authenticity of these records from the moment the digital archival records are taken over from the creators. Today, this is done primarily by calculating a hash value for each archival unit of digital records taken over to archives, and it is stored and preserved with the record in the e-repository. The combination of blockchain technologies and artificial intelligence can more effectively identify potential changes or tampering with digital records, thus protecting the integrity and authenticity of archival digital records. Some archives around the globe have already approached these solutions. E.g. The National Archives (TNA) is researching and introducing this technology through the Arcangel project, which is expected to provide the right answers and solutions within two years (University of Surrey, 2019).

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32 RFID is a technology for transferring data between the reader and the electronic tag for identification purposes. The tag consists of an integrated circuit (chip) that stores and processes data and performs modulation and demodulation of signals. The other part of the transmitter is an antenna that receives and transmits radio signals. The RFID signals from the transmitters are received by the RFID reader, which allows identification of the objects to which the transmitter is attached.

5. CONCLUSION

A short walk through history shows that public archives, like many other organizations, had to adapt to social and technological changes since their formation. This also applies to Slovenian public archives, which were actually unrecognizable in the society until the adoption of PDAAIA and its subordinate regulations in 2006. The adoption of new archival regulations, in addition to a number of new professional tasks those regulations gave to Slovenian public archives, also caused them to start adapting themselves to the challenges of the digital age.

Social media, open data, big data and record management issues such as freedom of information, privacy, open government and security all point to new trends that shape new views on records, their value, their role, and management. The impact of digital technology not only changes the nature of records, but also the way people and organizations in society behave, communicate and conduct their business. Considering the direction in which the development of digital technologies and thus the society is going, Slovenian public archives will have to make many radical changes to their business. Only in this way will they be able to fulfill the increasing expectations of the users of their services. The e-archive, which is being developing for almost ten years, will be the first generation of the e-archive. It will mostly simulate current archival practices, which are based on paper record management. Today is the time when Slovenian public archives have to think about a new vision for the second generation of e-archive and come up with a new "digital" strategy together with its implementation plan. However, in order to be able to achieve this, they will have to upgrade their current knowledge of digital records management and understand all the risks involved. Employees of archives need to start paying more attention to the learning about and understanding the opportunities offered by modern digital technologies and use that knowledge in the archival practice. The strategic goal of Slovenian public archives in the next five years after the completion of the development of the first generation of e-archive should be to provide services in completely new ways and to form and provide completely new services using new digital technologies. For the next five years, a comprehensive digital transformation is awaiting Slovenian public archives.

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Authors are responsible for ensuring that their manuscripts confirm to the journal style. *Sub-heading* should be in capitals (or Roman numerals); sub-headings in lower case italic. *Quotations* should be in single quotation marks, doubled with single. Long quotations of five or more lines should ne indented without quotes. Capitals should be used sparingly, principally for proper titles and where they may ne necessary to avoid ambiguity.

REFERENCES

Simple references to be inserted in round brackets at the appropriate place in text, sating author's surname, publication date of work referred to and, and where appropriate, relevant pages. For example: (Adams, 2006: 34).

Comments to apear as notes, indicated consecutively through the article by raised numerals corresponding to the list of notes placed at the end of the manuscript.

Reference list to appear after the list of notes, containing all the works referred to, listed alphabetically by author's surname (or name of sponsoring body), stating author's surname, forename and/or initials, date of publication, title of publication, edition, place of publication and publisher, and pages if relevant. For example:

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semper et in aeternum"*