

The Intrinsic Value of Archive and Library Material

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by Angelika Menne-Haritz and Nils Brübach

List of criteria for imaging and textual conversion for preservation.
Results of a [DFG](#) project

English version is available only in electronic form. The German Version is available in printed form. It can be obtained by sending a command to the Archivschule Marburg. The German version contains forms for the identification of intrinsic value, which are not reproduced here.

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The Project

From 1995 to the end of 1996 the Marburg Archive School carried out, with financial support from the Deutsche Forschungsgemeinschaft (DFG), a project to determine the intrinsic value of archive and library material. The aim was to develop a list of criteria which would allow a speedy and rational selection of holdings requiring, on the one hand, measures to preserve the documents in their original state, or else conversion to durable materials.

The first step was to review the available literature. A questionnaire was then drawn up and sent to a selected group of archive and library experts. At a meeting on 18 April 1996 the results of the survey were discussed and a provisional list of criteria was made. The final version of the criteria was agreed on by a smaller circle of experts at a further meeting on 7 November 1996.

The participants at the first meeting were:

Prof. Hans Bohrmann, Institute for Newspaper Research, Dortmund; Dr.Nils Brübach, Archive School, Marburg; Dr.Eva-Maria Dickhaupt, Research Centre for Personal Documents, Marburg, Dr.Christoph Drüppel, Esslingen County Archive and Federal Committee of Communal Archivists, Esslingen; Dr.Peter Fleischmann, State Archive, Nuremberg; Prof. Horst Gronemeyer, State and University Library, Hamburg; Dr.Elmar Härtel, Herzog August Library, Wolfenbüttel; Dr.Joachim Jaenecke, Berlin State Library - Prussian Cultural Collections, Berlin; Dr.Robert Kretzschmar, Baden-Württemberg State Archive Administration, Stuttgart; Dr.Angelika Menne-Haritz, Archive School, Marburg (Chairperson); Michael Merchel, Ministry of Home Affairs for Saxony, Dresden; Dr.Werner Röder, Institute of Modern History, Munich; Dr.Helga Unger, Bavarian State Library, Munich; Ulla Usemann-Keller, German Library Institute, Berlin; Dr.Hartmut Weber, Baden-Württemberg State Archive Administration, Stuttgart.

The participants at the second meeting were: Dr.Nils Brübach, Archive School, Marburg; Prof. Horst Gronemeyer, State and University Library, Hamburg; Dr.Joachim Jaenecke, Berlin State Library - Prussian Collections, Berlin; Dr.Angelika Menne-Haritz, Archive School, Marburg (chairperson); Ulla Usemann-Keller, German Library Institute, Berlin; Dr.Hartmut Weber, Baden-Württemberg State Archive Administration, Stuttgart.

Work on the project was supported by a work group of students from the Archive School, Marburg. They were responsible for some papers incorporated into the project report and also for taking the minutes at the first meeting of experts. Members of the work group, under the leadership of Nils Brübach were:

Dr.Irmgard Becker, Dr.Peter Exner, Dr.Martin Fimpel, Irmgard Fliedner, Dr.Uwe Grandke, Dr.Thekla Kluttig, Dr.Achim Krümmel, Dr.Thomas Küster, Kerstin Langschied, Dr.Christoph Popp, Dr.Barbara Rößner, Dr.Katharina Schaal, Dr.Andreas Weber, Dr.Norbert Wex, Caroline Wilhelm.



External formal features of archive and library material

Archive and library material, as defined in this report, is everything which is stored and made available for use according to the function of archives and libraries. It includes texts and physical contexts. The production of printed works, minutes and notes, as well as written communication within administrations in the course of decision-taking, produces concrete material. Statements and messages are put into a form that makes them as easily transmittable and as directly communicable as possible. The formal features employed are partly deliberate and partly pure convention. They serve to emphasize the salient points of a text, often rendering them comprehensible, or can themselves become the subject of research which elucidates their

contexts, their production and genesis.

External formal features, i.e. the testimony, of archive and library material express their message by non-textual means. There are many varied non-verbal possibilities. They are unobtrusive and, in contrast to the text, their significance is not immediately recognisable. Their important characteristics become apparent as questions arise in the use of the text. These non-verbal features make the text accessible and must be interpreted in order to understand the text fully.

At first sight it is therefore easy to overlook the external formal features of a text, to take them for granted and overlook their evidence. However, when the text has to be placed in its geographical and chronological environment in order to ascertain more about its origins and background, it is necessary for these factors to be considered. Conclusions reached about the way a text evolved furnish authentic testimony as to its origins and purpose.

The production of concrete material as an expression of communication, be it knowledge, be it the elements of a decision, places the required texts in a chronologically and geographically definable environment. The external formal features link texts to the material world and thus to their history and their transitoriness. Archives and libraries render their holdings accessible through their history, as revealed by their external formal features. Their condition when they come into the possession of a library or archive is the most telling evidence. Every succeeding alteration weakens it. The task of preservation is therefore complementary to that of ensuring permanent accessibility. Preservation must stabilise the present evidential value and prevent any future change.

Written material in libraries and archives

External formal features play a particular role for archive and library material. They are the result of written communication, independent from the number of copies or the number of editions.

Setting something down in writing is of particular significance in the discussion about intrinsic value. It stabilises the content. As long as subject matter is passed on by word of mouth, or as long as different opinions presented in a discussion group are not set down in the minutes they remain in a state of flux and can be changed unnoticeably or in an underhand manner. Every written record, be it a note in the files, be it the manuscript of a literary or scientific work, stabilises the content expressed in it. The content is linked to certain external features which bind it to material objects. Hand written manuscripts, whose different chronological phases can be apparent through the different colours of the ink, can be sufficient for this. This applies to the production of a book, a journal, a newspaper or to a note made for a file, which makes a particular observation relevant for future decisions.

Writing is a form of using language to describe observations, in order to communicate them. The differing media in which language is expressed give the content their characteristic features. They are the basis for different effects and functions of the content expressed.

Functions become relevant which are latent but usually not consciously used. Language formulates content and gives it a form which distinguishes it from others. This description in its oral form can very quickly change and be forgotten. Writing lends language additional functions by fixing the formulation of the contents, so that they can be remembered and so used again. However, it reduces the expressiveness of the spoken word given by the tone of voice, the speed of delivery and onomatopoeic, not strictly verbal, expressions. Writing both limits statements and makes them more precise. At the same time it extends the stock of signs in contrast to the sounds of speech by means of graphic symbols such as ticks and underlining, by additions such as marginal notes, through script form and the colours of the writing materials, and it achieves an additional, very useful, effect: writing fixes spoken formulation in time. Writing helps memory to externalise. Written notes can be picked up at any time and made use of again through renewed reading.

A written message, in contrast to communication in the reduced oral form, allows a more effective use of language. An oral or written form of communication can be selected according to the

degree of directness and frankness desired in the matter to be communicated, or the precision and ease of recall.

In order to achieve communication, in other words, in order that the verbally formulated subject matter can be understood, it is necessary that the message itself as well as the intention conveyed by the form of the message should be understood by the listener or reader. Oral as well as written communication must be interpreted in order to make the subject matter credible or to differentiate it from other statements. A written sentence, as well as an oral statement, can be misunderstood or its source can perhaps be considered unreliable. It requires a supporting context to safeguard it. The deductions made from context about the provenance of a text is such an obvious cultural skill in the employment of language, and so also of documents, that it does not have to be specially learnt or explained. The loss of the physical contexts, and therefore the aid they give in interpreting and understanding a text, as can happen when texts are digitalised, makes their importance particularly clear.

The effect of digital representation

Electronic mail and digital publications extend the choice of available forms and functions beyond those of oral and written communications. They bring a new flexibility to the written word. Electronically written scripts are no longer automatically fixed in time and their formulation is no longer final. Electronic communications can employ greater precision and textual memory aids, but they can also discard them when this is necessary for a quick and direct reaction or innovative approaches.

Flexibility, however, implies complete and continual variability of the text, despite its optical representation, for example on a monitor. This continual variability also annuls the chronological fixation of a text. The numerous versions of a text produced and revised by electronic means are repeatedly rewritten. The text is no longer an entity but rather a continual process, as long as it is electronically retrievable and processable. Interim versions that have been deliberately stored are only steps in the process and cannot completely describe it. Their degree of reliability is, however, dependent on their stability. When this is not given the ability of recall is limited, as there is no possibility for a specific recovery of past material. This would entail the simultaneous availability of all knowledge and experience, which is not possible. The possibility of recovering past material allows the storage of knowledge not immediately required. For this reason the degree of variability above what is currently necessary must be deliberately reduced. This calls for new methods for fixing texts chronologically and stabilising them in the case of electronic word processing. These methods must be deliberately employable while retaining flexibility.

The digitalisation of documents removes the material influence of the script on the subject matter expressed by it. Electronically stored texts, just as oral statements, can be changed without leaving any trace. The codification and decodification by the processor can give rise to mistakes that are not immediately recognisable. The image on the monitor or the printed page varies according to the software used, or the version of it. Intentional alterations cannot be completely excluded during the course of copying or the regular transfer of material made necessary by the obsolescence of hardware and software. They occur without trace and can only be discovered when versions are compared. Digital material is dependent on numerous technical protocols produced by the operating system and the software used, which are not accessible and which change spontaneously during use. Authenticity is not attainable in electronic, digital representations. Thus in electronic word processing a function of writing on paper is lost that was previously of chance importance and was an automatic byproduct that could be made use of when necessary.

The discussion about intrinsic value also draws attention to the need for contextual features or means for preserving their testimony by stabilising their condition. This cannot be achieved by digital means. The stabilisation of the state of a digital text at a particular point in time, necessary, for example, to reconstruct the grounds on which a decision has been made, can only be attained by transferring it to an analogue representation on microfilm or paper. If the additional technical information is transferred at the same time, the original electronic functionality can be restored when it is redigitalised.

Not until an electronic text has been represented in analogue form on paper or microforms is the content matter of the text stabilised. The stabilisation in analogue form reestablishes the function of script. The electronically formulated and communicated subject matter becomes precise, unequivocal and memorable. In this way memorability is externalised. The facility a script gives in the solving of problems by splitting them into different spacial and chronological aspects is thus also available again.

The functional chain of the different forms of linguistic representation is of great importance for those libraries and archives, whose duty it is to safeguard society's ability to recall its past. Whereas libraries are more concerned with keeping up knowledge and making it available, archives guarantee the availability of earlier experience. Both fields, however, employ the stabilisation and concrete form of the content of library and archive material in order to make it available.

Image conversion and stabilising testimony

For this reason, it is mainly written and printed works, such as files, written documents, books, journals, maps and plans which are considered for the working out of criteria for the identification of intrinsic value. In the case of these, the loss of testimony is endangered, not only through the physical degeneration of the items, but also through the unconscious destruction of evidence as to the context and circumstances of their origin, which can occur during their conversion and must therefore be prevented by a previous analysis of their intrinsic value.

The external features of written historical material or description are of basic importance for both fields. Isolated information exists neither in libraries nor in archives. The subject matter requires the material form of paper and ink, of film and coating, for its content to be understood, as it is dependent on the concurrent interpretation of the formal features. They present the textual content with its affiliations, clarify intentions and make the contexts accessible. Only within this framework is the subject matter comprehensible.

Because of endogenous paper deterioration, insufficient storage space and increased usage, conservation is becoming of first importance to libraries and archives. The continually increasing recourse to archive and library material gives rise to an almost insoluble conflict with the need to safeguard long-term accessibility.

The archival processing of administrative documents should make them accessible for use. Archival appraisal identifies those items which need to be destroyed so that the remainder can be retained and made accessible as authentic historical material. Archive material should not suffer any alteration, reordering of sheets nor dilapidation in the course of their description, their conservation or their use, because this would prevent a future unequivocal interpretation. Archival processing also calls particularly for material stabilisation at the time of description in order to safeguard the testimony of the formal features of its transmission.

Analog image conversion stabilises the testimony of archive and library material. It maintains the utility of archives and the preservation of printed matter, even when the originals have been altered or destroyed through endogenous or external circumstances. It can also reconcile the contradiction between the demands of preservation and availability if it represents the evidence of the originals in unaltered form. Microfilm is a possibility of preservation by conversion to durable materials and capable of repeated reproduction, even when the original has perhaps been lost.

The necessity of criteria for conversion procedures

An image conversion in analogue form, such as film or paper copy, cannot, however, reproduce certain kinds of evidence given by the external formal features. An exact definition of the prerequisites which exclude conversion and instead demand the preservation of the original is necessary for the consequential use of conversion procedures. This is achieved by establishing the intrinsic value as a criterion for the non-convertability of the evidential value of library and

archive material. The same requirements as for analogue pictorial conversion are set for digital pictorial and textual conversion. However, because this method cannot preserve the evidential value and, in contrast to film, renders the reproduced picture or transferred text flexible, it does not come into question as a means of preservation.

Digital forms of reproduction, however, are often more user-friendly because of their electronic research functions, which are made possible either by means of an additional index in the case of pictorial conversion, or text research for text recognition, and textual conversion. The loss of evidential value and permanent accessibility inherent in digital forms and textual conversion exclude them as a preservation medium. They can only be employed in addition to preservation on film in order to increase the ease of use.

As soon as an oral, written or electronic message formulates contents in order to convey them, it obtains through its expression in a specific medium additional features that are inherent to the medium used. The intention of the message is thus supplemented by the necessarily linked motive in the selection of the medium used and the form of the communication. The text of a foreign ministry memorandum, for example, takes on a different meaning when it is printed in a newspaper. And doctoral theses, at least when they are published in the original version presented for the examination, do not need the endorsement of their scholarly value by appearing with a well-known publisher, as the examiners' report has already established this. When the reputation of the author is enhanced by the reputation of the publisher this is an additional effect that in some cases, however, is to the benefit of the examiner rather than the author. A text published by an author on the internet has a provisional, ephemeral, quality lent by the medium and therefore urgently require the last alteration date.

Once the intrinsic value has been defined it is possible to decide about a conversion for the protection of the original. A separation between preservation and accessibility becomes possible by providing for use authentic reproductions and representations that convey as extensively as possible the evidence of the original. In exceptional cases and on special application the originals can be consulted.

The definition of intrinsic value, together with directions for its application for particular tasks within the framework of preserving collections, is, above all, an instrument for selecting procedures that combat the effects of paper deterioration or contribute to damage repair by converting endangered documents to durable materials. Apart from this, the definition is useful in resolving the conflict between the demands of accessibility and preservation in other fields of archive and library work.

Prerequisites for the application of the criteria of intrinsic value

Intrinsic value is based on certain testimonial qualities of library and archive material which support or clarify the content through external formal features, often dependent on the history of the item. External formal features have a non-verbal, visual testimonial quality. The testimonial quality associated with these features often decides on their inclusion in an archive or their purchase by a library before preservation methods are considered. The insight given by these features augments the contents of the text and can for some items even be of major importance for their purchase or appropriation. When certain volumes are chosen by an archive from a number of similar parallel files to be kept for the reconstruction of administrative processes, the evidence they give lies mainly in formal external features and not in the text itself. The appearance of the external formal features of archive material gives testimony about the circumstances which produced them. The identification of the evidential and informational value of administrative records that leads to the decision as to which parts should be retained as archive material is a qualitative appraisal. It determines as to whether testimonial quality exists. It does not discriminate between the different forms of testimony. Archival appraisal and purchase decisions made by libraries take place before the analysis of the intrinsic value. They presuppose that library and archive material have per definition external formal features that first make possible their reading and interpretation, and that these features are coupled to testimony worth preserving. When analysing intrinsic value it is necessary to investigate the form and manner of the physical evidence, that is, its testimonial quality. On the basis of the external formal features the form and kind of the testimony can be determined and a decision taken as to measures for its preservation.

This is the establishment of intrinsic value. It investigates the quality of the testimony and sets down in which form it can be realised. Very many testimonial qualities are preserved after the conversion to other materials or other forms. Their transferability is the criterion for employment of different methods to retain the quality of the testimony.

Intrinsic value and preservation

Intrinsic value has up to now played a minor role in archival science and library literature. The discussion about its definition and identification has been enhanced by recent statements of the problem and strategic preservation approaches.

Measures taken for preservation of library and archive material, the conservation of the originals or their conversion, run into the danger that external formal features of files and printed works can be overlooked or falsely evaluated when their importance for archive or library consultation, their accessibility for reading and interpretation, is not known. The ordering of pages in files of loose sheets, the bindings, the pencil notes of one author in the book of another, which was in his library; all these features are clues which give testimony to those who can interpret them about physical context and causality. This testimony is non-verbal and depends solely on appearance. This makes it direct and authentic but also dependent on the understanding of the person looking at it.

Paper deterioration, which has threatened industrially produced paper since the middle of the nineteenth century, makes conservation measures necessary in dimensions far beyond the usual spectrum of conservation and restoration measures. Decisions of great import regarding the economic employment of present possibilities have to be made.

The best and most economic method for avoiding the danger of deterioration is to forego the use of paper containing acid or lignin in the production of books and written documents. Preservation of the original is also technically possible for paper threatened by endogenous deterioration. The measures developed for doing this comprise the deacidification of the paper in conjunction with stabilising measures including paper splitting.

Deacidification prolongs the durability of paper by means of buffers and makes sense when paper is still sufficiently strong. Mechanical strengthening procedures such as paper splitting also help to stabilise paper that is already damaged. Mechanical procedures are available for both cases.

A large number of threatened items cannot be preserved in their original form for economic reasons. Endangered information has for a long time therefore been transferred economically and effectively to stable microfilm. Quite apart from the development in costs of mass deacidification programmes, transfer of documents and media to film is suitable for material of no intrinsic value since it also saves storage space.

Serious testimonial loss can only be avoided by conversion to durable information media in image or textual form. It must be established for which testimonial features of the item in question the potential loss of information during conversion lies beyond what can be justified professionally. Conversion does not come into question for such items. They must be preserved in their original form regardless of cost. Exact identification of these items in archive and library collections is necessary.

This can be done by establishing which items retain their testimonial value after an image conversion with perhaps an additional textual conversion. Closer investigation shows that a large number of items held by archives and libraries can be converted without information loss. To identify these, certain rules must be followed which can be worked out with the aid of the criteria for intrinsic value.

The definition of intrinsic value is based in the first place on the presence of such features whose appearance offers clues as to particular intentions or circumstances concerning their origin or transmission. This evidential value conveys information about an item to the user or reader. Both the content and the formal features of the written form offer new insights.

Conversion methods

The safest way to retain authentic testimony is to preserve the original. However, when the originals deteriorate for endogenous reasons new ways must be looked into. Consultation in reading rooms or offices, which wears the item and contributes to its continued degeneration, also stands in direct conflict to its conservation. However, items are preserved in order to be used so that this conflict must be resolved. The development of conversion forms offers a solution for utilisation. The conversion is made on to copiable materials from which cheap duplicates can be made. These can be made available for use so that the film negatives or master copies do not suffer wear and tear. Current conversion methods are filming, imaging and digital text recognition.

Filming

Microfilm reproduces a document with an image in analogue form. The pictures are taken on film rolls or sheets (microfiche). Conversion thus takes place through image representation on to another medium. This image representation can be duplicated as often as desired and so that copies of the original can be made available for use in unaltered form (Weber, 1992).

Roll microfilm is a typical sequential imaging means, while microfiches facilitate the deliberate selection of individual pictures. Microfiches can be produced by optical rearrangement of microfilm rolls.

Roll film can be equipped with so-called blips for research purposes, which enable a deliberate selection of individual pictures. Their use is closely associated with an additional description and retrieval, which makes electronic research possible.

Imaging

Originals can be digitalised in image form and electronically stored and processed. Imaging is also the first step in converting a text to a visual form, in which the digital image is compared with the characteristics of the script and, where they correspond, transformed into the appropriate code. The text can then be electronically processed.

Because of the quality differences between analogue and digital images as well as the uneconomic costs of the required digital quality the final report, "Digitalisation of endangered library and archive material" presented by the workgroup "Digitalisation" of the DFG subcommittee on collection preservation recommends the scanning of microfilms (Dörr and Weber, 1997). This procedure can be repeated as often as desired without endangering the original.

Digital imaging is not suitable for permanent storage. For working purposes, however, it is very user-friendly because electronically stored pictures can be linked to features which enable research into them. The main advantage lies in the fact that digital images can be made available anywhere via electronic nets. Particular requirements must be met for representation on a monitor, which have also been listed in the previously mentioned final report of the "Digitalisation" workgroup.

Digitalisation with text recognition

Digitalisation, where scanned-in pictures are converted to text by means of OCR software, creates a text which can be electronically processed. The various procedures for fully-automatic or trainable text recognition and their differing strongpoints are also described in the above-mentioned DFG report. The conversion produces processable texts, without reproducing all contextual factors. It produces an electronic text with the advantage of full text research and the disadvantage of stability loss. This makes it more user-friendly, but unsuitable for sole and authentic storage. In order to test the authenticity of the text a back-up analogue representation, such as the representation on microforms, is necessary.

The intrinsic value of originally digital publications

Digital publications, offline on CD-ROM or online, are, at least since general use of the internet, usable independent of their ownership. Whereas in the case of handwritten or printed material their availability for use is dependent on their physical existence, this does not apply to originally, online electronically available texts.

Libraries used to be the main distributors of information as they made books and printed works available. This function of libraries gives rise to the task of preservation in order to ensure permanent availability. However, the preservation of books does not alone ensure their informational quality. Knowledge can become obsolete or can be reworked and incorporated in other scholarly works. Both of these can reduce the informational quality of printed works to the characteristics of book production, and, as this testimony may be available elsewhere, make the physical preservation of individual copies of printed works superfluous. The purpose is the availability of the information. However, the logistic treatment of material objects such as books is normally the prerequisite for the availability of their evidential value. This is not so in the case of online accessible original digital texts.

Originally digital texts have different characteristics than handwritten or printed texts. The internet signals provisionality. It therefore creates the need for the publication itself to be externally authorised. This occurs either through the quasi-physical connection to an authorising homepage of areas of the server accessible only to the homepage managers or, as in the case of a doctoral thesis, through the examination of the thesis itself. Both of these are a form of reliability audit and replace, as already in the case of doctoral theses, the scrutiny by a publisher's reader. This does not apply where texts are made electronically available to closed groups, or for internet publications for which the author alone is responsible.

The accessibility of a publication is dependent on the organiser of the homepage or on the author. This means that its preservation is no longer the prerequisite for its use. An external distributor of the information is no longer necessary. However, the contents only remain permanently available if their preservation is deliberately ensured. The task of libraries is different for electronic publications than for printed matter. Preservation becomes the priority. This can only take place through conversion to a stable medium. Only when libraries want to preserve electronic publications, for example by a print-out, can they ensure their permanent accessibility even when they are no longer available on their original server. For this the additional features for the reliability audit must also be converted. This, however, raises the question of the rights, and perhaps duties, of the author and the operator of the server. Does copyright also include the right to destroy the contents?

The stabilisation and permanent availability of originally digital publications can only be achieved through long-term programmatic, but very expensive migration or by conversion to analogue representation, be it paper or microfilm. Electronic functionalities which cannot be represented in an analogue fashion must be represented in such a way that redigitalisation restores the same functionality as in the original publication. The HTML codification common to the internet could offer the possibility of reconvertability of electronic functionality after analogue storage.

Image and textual conversion

The conversion methods which can be used for the preservation of testimony of archive and library material fall into the categories of image and textual conversion.

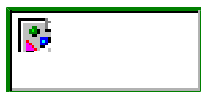
Analog image conversion has the advantage of stabilisation and authentication. The representation is more stable than the original. Conservation authorities and researchers into art history make use of earlier pictures when reconstructing the original state of buildings and artworks. The traces of usage can be very precisely made out on filmed archive material converted at an early stage. Even were it at some time to deteriorate through use, the original condition can be recognised. Image conversion can reproduce certain testimony of the prototype.

However, when it is digitalised it loses its stabilising function. Digital image conversion should therefore be undertaken from microfilm. This makes it permanently available for double-checking.

Pictorial analogue conversion guarantees the stabilisation of the original, and is therefore suitable when the intrinsic value is considered insufficient to warrant its inclusion in a library or archive.

Textual conversion is open to greater danger of alteration. When a text is copied errors can be made or the text deliberately falsified. On editing a text not all external features, such as deletions and additions, can be mentioned and notes explaining the state of the original may perhaps be misunderstood by the reader. Moreover, digitalisation of a text renders it alterable without trace and can, solely through its technical processing, result in discrepancies between the original and its reproduction.

Textual conversion is not suitable as the sole replacement for the original. It can make the processing of texts easier, but here also requires a pictorial analogue representation as a permanent validation.



Criteria for the establishing of intrinsic value

The concept of intrinsic value, as it is used here, was much influenced by the ideas of professional American archivists. It was employed above all in the National Archive in Washington for the preservation of the collection and the development of strategies to do this.

Intrinsic value is given when the testimony of the original relevant for its consultation is not completely preserved on conversion to a different medium. Intrinsic value is based on features whose testimony is dependent on the form of the original and can therefore not be converted. As prior archival appraisal or purchase by a library have established this testimony as being worth preserving and relevant for consultation, the possible loss of testimony on conversion requires the preservation of the original. The intrinsic value is therefore the characteristic that excludes a conversion of archive and library material. The establishing of the lack of intrinsic value means a decision must be made as to what kind of conversion is suitable.

Criteria for the establishment of intrinsic value can help in selecting that part of a library or archive collection that is suitable for certain conversion measures. They should give guidance for practical use and the filling out of appropriate forms should make it possible to apply them quickly and efficiently.

Duplication, the production of copies or transcripts, or the printing of texts have always been a way of making them more readily available and better ensuring their preservation. Even where only a few copies survived the dangers of time and history, the purpose of the production and preservation of the original has been achieved. It still serves for information or for symbolic use, as when oaths are sworn by laying a hand on a bible.

Duplicate copies reduce the threat for library collections

Up to now libraries have profited from this side effect in the improvement of availability through duplicate copies. Printed books which appeared in an edition of several hundred had a relatively high chance of surviving in sufficient numbers. Even when no particular measures were taken the size of the edition has always been a relatively good guarantee for published material. Unica and collections of handwritten documents have always enjoyed particular protection.

Paper deterioration makes books comparable to unica

The phenomenon of paper deterioration endangers the entire production of a book which has been printed on the same paper, and therefore applies to all the copies of an edition, also depending on the external factors of storage and use. Relying on the large number of copies is only of limited help in such cases. Regardless of the size of the edition, not a single one of the printed items has a chance of survival in its original state.

In comparison to an author's manuscript, the physical production of a book brings additional information through its own characteristics and features. The publisher's name lends it a certain authority and establishes a connection between the contents and other productions of the same publisher. The place and date of publication, the ISBN, the form of binding, the number of pages, all give additional information which can strengthen or weaken the content of the text. The book produced by a publisher is therefore the result of the text as produced by the author and the publisher's production of the actual book. This in its totality has a testimonial quality made up of the contents and the outer form of the book. Form and content complement each other. Both together are only available where at least one copy of the edition survives.

Uniqueness or unicum character have up to now increased the danger. However, the threat of paper deterioration is the same for large editions of books as for one single copy. Libraries therefore often find themselves in the same situation as archives, which are concerned with unique documents and sources of information. Libraries are being increasingly confronted with this problem. Paper deterioration, which eliminates the automatic safeguard of a large edition, brings libraries and archives into the same situation of having to concern themselves with the preservation of the actual testimonial quality or quasi-unique features.

Different aspects of uniqueness in archive collections

Even more than with books, archive collections are concerned with the different aspects of testimonial possibilities, with different forms of reading and research into them. Archive material is unique in more than one way. It has a unique evidential value as to its genesis. It originates from a unique, usually cooperative process of decision-making and the physical composition of the documents in the individual files is unique. All these unique features tell us something. The page order demonstrates the chronological order of the working stages and can even elucidate a connection between question and answer. The colour and labelling of the file cover, insofar as these have been preserved for contextual reasons, can offer clues as to the working process. The colour of notes made on individual pages show who intervened. Even the order of the files in a register can offer clues as to internal connections, which would no longer be recognisable were this feature to be lost. And copies of the same manuscript become unique specimens when they have been made use of in different working processes or when they have influenced various decisions and so left varying traces of the work process. As opposed to manuscripts, files are not created to be duplicated; their purpose has been achieved when they are complete, when they have been closed. They are not, like a manuscript, prepared by a publisher, printed and sold. Thus they do not profit from the side-effects connected with distribution, that is their safeguarding and preservation through multiplication.

In the archival processing of administrative documents for evaluation uniqueness is the deliberate aim. The utilisation of files as archive material requires the realization of a new purpose that can only be undertaken with completed, closed files. This occurs through appraisal, the aim of which is to identify uniqueness. Only uniqueness ensures authenticity. A number of items with the same information and external features can, in the course of future use, develop in different directions. Forgeries, impairment of readability and later additions can be clearly identified when the uniqueness and therefore the authenticity of the original is assured. Duplicate copies, contributory files, unprocessed copies and forms are destroyed. Uniqueness of action and uniqueness of information are the two criteria for archival appraisal. It condenses the documents selected by the administration to a concentrated form and thereby creates archive material freed from repetition and ballast. The safeguarding effect of redundancy is, other than in libraries, not linked to identification and description, that is, to the genesis of archive material. It is one of the measures taken for preservation and storage in archives and must be an additional and deliberate aim. After establishing whether an item is worth keeping in an archive and thus becoming part of the

collection, measures for its preservation are taken. Producing of redundancy is one of several possible measures for preservation, after authenticity is established and stabilized.

The utilisation of image and textual conversion for preservation is therefore traditionally of great importance to archives. It is used deliberately and is not an automatic waste product of working copies. The danger that information is lost or changed by duplication is always present and must be weighed against the preservation effect.

Need of criteria for establishing intrinsic value

The prerequisite for the determination of intrinsic value is the unequivocal identification and definition of the item under examination. While this determination is unequivocal for monographies and journals acquired by libraries as well as in the taking over of private papers, in the case of archival acquisition of official records it requires archival appraisal and description. This refers to clearly defined archive and library material that can be unequivocally identified. The determination of the intrinsic value as criterion for the use of preservation measures cannot replace archival appraisal. It can only follow it. Archival appraisal and library purchases decide what is to be preserved. The determination of intrinsic value decides on how it can be preserved.

The analysis of the intrinsic value decides on the testimonial quality of the documents, which themselves, on the other hand, have to fulfill the criterion of uniqueness. The intrinsic value determines to what extent the external formal features of an item are informative for the reader or researcher. This concerns the purpose of the utilisation of library and archive material, and that is to gain information.

The use of different preservation methods dependent on intrinsic value

Two categories of measures to be taken come into question, which currently give rise to differing costs:

- Preservation of the originals through conservation method or by restoration measures with comparably high costs, whereby the development in costs of mass deacidification, where this is suitable, must be carefully observed.
- Conversion to durable media with the aim of substitution, with or without allowing the original to degenerate at lower cost. Conversion can take place by the following means:
 - > pictorially through filming, copying, reprints, digitalisation (imaging)
 - > textually through editing, transcription, digitalising with automatic text recognition.

The decision as to what measures should be taken must be made primarily according to professional criteria, taking the costs into account. The yardstick of intrinsic value is the basis for discriminating between different prerequisites for both categories of preservation measures, as it is oriented on the testimonial quality of the item concerned and is thus definable for the work of archives and libraries.

Kinds of features of testimonial quality

The use of conversion instead of preservation of the original depends on the kind of features of testimonial quality. An item can have one or more external formal features of testimonial quality. What counts above all in analysing intrinsic value is to what extent the testimonial quality of these features can be reproduced by image and textual conversion.

Roll microfilm, when properly produced, automatically preserves the already existing order. It needs to be read picture by picture. Microfiche film is particularly suitable for a directed selection of individual pictures. As opposed to three-dimensional objects, the information which can be deduced from the space taken up and ascertained by specific actions, such as turning over pages, is no longer accessible in the case of imaging. The ease of use changes.

Whether an item can be reproduced depends not only on the item itself but, above all, on the

those features of testimonial quality which make up the intrinsic value. Thus the reproducibility of certain features can lead to their being filmed if these can be preserved in this way though other features are lost.

The choice of the method is linked to the costs. Economic considerations force the choice of method. Professional criteria, the kind of features and their testimonial quality should above all influence the decision.

There are several groups of intrinsic testimonial quality on the basis of determinable features:

- Testimony that elucidates the genesis of the current condition includes:
 - notes made by former owners of libraries or collections;
 - notes concerning the use of archive material made when it was created: instructions, entry stamps, coloured pens, file covers, form of document;
 - stitching, binding, cover form of volumes and books typical of a certain time; the author's deletions and corrections, which can clarify the order of different versions of a manuscript or the
 - influence of other people or particular events on the final text.
- Testimony that complements the content of a text:
 - type of script
 - text layout
 - readability of text.

These testimonial characteristics can be divided into those that can be reproduced by image conversion and those that cannot. Clear quality standards must be maintained. They include the order of conversion as the documents are read, also in the case of written items with many cross-references. They require continuous numbering and the reproduction of a scale. The quality of the reproduction must take account of the intensity of the original and requires an acceptable format. Uniform standards are necessary. For this reason the quality criteria should be based on those of the DFG.

Testimonial characteristics can be divided into the following groups according to their reproducibility:

- Those characteristics and features that are not reproducible by the usual methods of image conversion include
 - spatiality (thickness of books and files, form and order of pages, paper quality, wear and tear, for example in an estate or in reference files, binding technique, binding material and stitching);
 - signs difficult to recognise (reliefs, faded stamps, water marks etc).
- Testimonial characteristics and features which can only be reproduced by special processes of half-tone or colour reproduction include:
 - deliberately employed colours (e.g. coloured pens in administrative documents, colours used for underlinings in books, coloured prints in literature);
 - colours present by chance and signs difficult to recognise (e.g. ink colour as a clue for relatedness, water marks).
- Testimonial qualities and features that are reproducible by imaging include:
 - the form of notes (e.g. paraps in written documents or notes and underlinings in books);
 - The order of the pages or sides - details about the size can be given in additional information such as a cm scale on the microfilm picture;
 - the particular format (letter-headings, page layout of books, production features in the case of books;
 - texts and their layout (structuring into paragraphs, earlier devotional spacings, placing of pictures).
- additional textually convertible testimonial qualities and features that increase ease of use include only
 - the contents of the texts (the actual informational content of writing in files or books for the addressee).

The decision whether to preserve the original or to convert it must take into account the kind of features which influence the convertibility of the testimonial characteristic to be preserved. The decision can be based on the following table.

Table for the use of conversion as a preservation measure

Use Method	convertible	not convertible
1. Imaging with particular procedures	<ul style="list-style-type: none"> • deliberately used colours (such as coloured pens coloured print in literature); • chance colours and signs difficult to recognise (e.g. ink dye, watermarks) 	<ul style="list-style-type: none"> • unusual appearance • artistic value • market value • display value • binding method and form
2. Imaging with standard microfilm and microfiches	<ul style="list-style-type: none"> • note form • order of pages or sides • particular design • texts and their arrangement (organisation, placing of illustrations) 	<ul style="list-style-type: none"> • as above for 1 • signs difficult to recognise (embossed reliefs, faded stamps)
3. extra textual	<ul style="list-style-type: none"> • the content of texts (the actual information of the writing in files or books for the resp. addressee) 	<ul style="list-style-type: none"> • as above for 1 and 2 • graphic order • connection to illustrations

Summary of the most important features on which the analysis of convertibility is based



Catalogue of Criteria

The criteria offer assistance for the upkeep of collections. They are not criteria for the appraisal, selection or evaluation of items for library and archive collections. These professional decisions must precede this. The criteria should indicate how to achieve the preservation of the testimonial quality of endangered items in library and archive collections. For this the following three alternatives must be considered: preservation of the original, conversion with preservation of examples of the original, or complete conversion. These have the following consequences respectively:

1. Preservation of the original: In this case conversion would destroy significant testimonial characteristics. The originals identified on the basis of these criteria should be preserved. Only the originals can guarantee the permanent accessibility of the testimony, both of the contents and the external formal and transmission features in this category of archive and library material.
2. Conversion with preservation of examples of the original: In this case analogue pictorial conversion can preserve the most important testimonial characteristics. Additional, not convertible testimonial features are repeated in the same way within the group of library and archive material identified by these criteria. They are sufficiently transmitted when some originals remain as examples.
3. Complete conversion: Here the testimony of the items is not dependent on external formal features. They can be completely reproduced by analogue image representation. A particular form or their own unique transmission traces are not important for these items. In these cases textual

conversion can also be considered, but only as an additional measure to increase the ease of use, not as a permanent form of preservation.

The following listed criteria for the preservation of the original, the conversion with preservation of examples of the original or complete conversion should clarify the use of the instruments of analysis developed in the above text. This is not a conclusive list, but rather an aid for the analysis of endangered items.

Prerequisites for the preservation of the original

1. Evidence as to an appearance that is rare, typical of a certain period, or unusual for that period.

Explanation: The items in library and archive collections, the files and books, have been produced manually or industrially. Differing materials and procedures were used, which must be assessed according to the period.

The appearance depends on features given to the items during production. A rare or unusual external physical form can clarify certain production methods. It can indicate the importance of the item to its maker. Such features can be the quality and kind of paper used, coloured settings, seals, stamps, reliefs and watermarks, particular forms of captions, the use of particular inks or the early use of machine print, office copies and particular kinds of binding, stitching or binding techniques typical or unusual for a certain period, as well as the form of binding. They demonstrate particularly clearly a form typical or atypical of its period or else these are unusual forms deviating from the norm. They are often formal features that themselves become the object of research.

Example: These include particular forms of binding for files and books, rotuli, particularly large or particularly small books, particular binding material, the first Rowohlt rotary printed novel.

2. Testimony as to the genesis of the work

Explanation: different manuscript versions with deletions and additions can give important clues as to the creation process and external influences of artistic work. They often offer an important background for the understanding of the finished publication. As the investigation of different stages in the transmission is mainly concerned with external features, which can be present in many different forms, quite minimal indications can be clues for completely new insights and hitherto unknown connections. The testimonial quality of the features necessary for this investigation can be endangered by conversion.

Examples: Parts of collections and estates in literary archives, author's libraries with marginal notes and other signs of use.

3. High artistic or aesthetic value

Explanation: Archive and library material that was considered to be of particular importance at the time of its origin or production, that was intended to be preserved for a long time, or be given particular importance by its appearance, or that played a major role in the management of the economy, was often produced with a high degree of craftsmanship or artistry.

Examples: Books with particularly magnificent bindings, hand-drawn maps or plans, architectural plans and drawings, photographic collections, monographies and journals with particular typographical features such as hand-coloured drawings and prints, official volumes with valuable bindings, with special organisation of the entries or artistic script; early examples of new styles.

4. Testimony of unclarified or disputed authenticity or unestablished origin

Explanation: Proof as to the origin or authenticity of documents can often only be brought when the external formal features can be examined according to different criteria. Age and origin of the paper used, ductus of handwriting, or the ink used provide such evidence. The concrete need for analysable features can first be defined when comparable items are at hand. Conversion could

impede any necessary examinations. In the case of large groups of items, for which an analysis of the external features can determine the origin, a few examples of the originals suffice.

Examples: Usually single blemished items of uncertain or destroyed provenance, uncertain or questionable authorship, proved or suspected forgeries (e.g. Hitler diaries).

5. Rarity and monetary value, great age, high market value, small number of extant copies

Explanation: Archive and library material can, for reasons of its origin and the particular importance given to it at the time of its production, be decorated or produced with particularly costly materials. A papal seal pressed in gold advertises both the importance of its owner and the matter endorsed by it. Along with the great age of some archive and library material makes these of great importance and a small number of extant copies renders them even more valuable. These values lie beyond the features necessary for the understanding of library and archive material, but lend these items a particular character. Their value cannot be adequately preserved by conversion.

Examples: Imperial decrees, particularly splendid illuminated handwritten manuscripts, items decorated in gold or silver or with precious stones; rare items sold at auction of which only a few are extant; valuable postage stamps on archive material; handwritten manuscripts from famous personalities, for example a Mozart composition.

6. Special effective value through a connection to historical events or personalities

Explanation: Some documents and historical items can establish a particular authenticity and a particularly effective connection to certain historical events and the persons concerned in them. This effective value is closely allied to the importance of the historical event and the importance attached to the people concerned. Its perceived importance can therefore change. It is similar to the exhibition value (see 7). However the prime aim of preserving the original is not to exhibit it. The effective value can also be communicated by means of a pictorial representation in a publication (not conversion), or by special exhibition for a particular occasion.

Examples: Constitutions of the states of the German Federal Republic in their sometimes very unimpressive external appearance; the Unification Treaty signed by Wolfgang Schäuble and Günther Krause; the note handed over during a television programme announcing the fall of the Berlin wall; food ration cards; founding documents of an institution; manuscripts of particular literary or scholarly texts and their first editions.

7. Didactic and exhibition value

Explanation: History classes in schools or adult education, the communication of historical background, and developments in exhibitions require demonstration material. Here objects are required which vividly illustrate an event or person, or an historical event, in a pictorial and graphic way. Curiosities and rare items fall into this category. These can overlap with other criteria, see above all 6.

Examples: Writing blocks, notched sticks, legal files containing items evidence, posters and pamphlets, individual passports, school reports, menus, entry tickets, autographs in autograph collections.

8. Legal evidence

Explanation: Archive and library collections can contain items which are legally obliged to be kept in their original form.

Examples: There is a legal obligation in some states that drafts of federal or state laws or communal constitutions, building files etc. be retained in their original. The destruction of the original after filming is prohibited in these cases. The obligatory publishers' copies for libraries usually presume the retention of the original.

9. Testimony as to the history of archive and library collections

Explanation: Older archive and library working material often contain handwritten additions and amendments that give information about additions to collections, their limitations or losses, and about previous ordering systems. They are frequently the only source of information for the reconstruction of the history of the collection. They can also be referred to for later description or research work. Archives sometimes contain administrative record lists as finding aids in which notes have been made regarding discarded items and inventorisation. The original can be necessary to interpret these traces of usage and so reconstruct the history of the material.

Examples: Old official manuals and archive registration books containing notes as to the processing of the material; old library (book) catalogues with deletions and amendments.

Several criteria can apply to one individual item. Where one of the criteria is satisfied the analysed item should be preserved in the original. The decision whether to convert it for use should be taken independently. In most cases, however, it is advisable in order that the valuable originals are only exposed to the dangers of use in unavoidable cases. They should only be made available for use in cases where the converted form is inadequate.

Image convertible archive and library material with preservation of some originals as examples:

The following documents and printed works have convertible testimonial quality when retention of examples of the originals enable the reconstruction of the testimonial characteristics possibly lost in conversion. It is above all items with repeated, uniform testimonial characteristics and multiple transmission of the external formal features which are suitable for this form of preservation.

To determine whether an item is unique or whether there is multiple transmission, the items within an institution can be investigated or the investigation can be carried out in cooperation with other equivalent libraries and archives. The prerequisite is the repetition of features of testimonial quality which can be clearly reconstructed for converted items on the basis of the items preserved in the original.

Should conversion be necessary for the preservation of a collection, the following kinds of archive and library material can be converted without loss of testimonial quality where samples of the original are preserved. Analogue image conversion cannot however, be replaced by digital or textual conversion without loss of testimonial quality and preservational function.

1. Journals and monographs

These are produced by a publisher. They are more or less deliberately given formal features on production, which are necessary for the comprehension of the published text. These features are repeated within an edition or over several editions. Most of these features are convertible or can be reconstructed for converted items on the basis of samples of the originals.

Criteria for the preservation of samples of originals:

Originals preserved as samples should above all be representative of a group of items. Further originals should be selected according to the list of criteria for the preservation of originals. With criterium 1 particular attention must be paid to certain publishers' productions.

Copyright libraries and specialist collections should be responsible for sample copies. Digitalisation or textual conversion cannot replace analogue image conversion for preservation purposes. It can, however, be employed in order to facilitate use and to protect the preserved originals.

2. Uniformly structured file collections in archives

These are created in areas where work procedures are similarly structured and which have uniform ordering of written material and uniform file composition. They can be arranged in chronological series of uniform script type or according to alphabetical or numerical references.

An exception is found in the mass of uniform parallel files of administrative authorities, which open with an application, often on a printed form, and close with a decision. They are identified in the archival appraisal as being of differing informational value but of the same testimonial quality. The informational value and parts of the evidential value can be imaged. Those parts which are not convertible can be reconstructed from the features of sample files retained in the original. Examples are: tax files, rent assistance files, social benefit files, social security files, planning permission files, official surveyors reports, technical permission and control procedures, examinations files of educational institutions, disciplinary proceedings.

Criteria for the preservation of samples of the originals:

Originals preserved as samples should be representative for the converted group of files. Further originals should be selected according to the list of criteria for the preservation of originals. Criterion 1 also applies to the file structure, so that particular kinds of files can be reconstructed in their original form.

Digitalisation or textual conversion cannot replace analogue image conversion for preservation purposes. It can, however, be employed to facilitate use and to protect the preserved originals.

3. Newspapers

Newspapers depend on time and place. They are produced to impart information directly and not for long-term preservation. This is why their preservation is particularly endangered. Their contents can in general be converted well by imaging. The non-convertible features can be reconstructed when a sample copy has been preserved.

Criteria for the preservation of sample copies

For national as well as regional and local editions an agreement should be reached among the archives and libraries concerned, so that one sample of every edition is preserved. Newspaper supplements should also always either be filmed or preserved as originals. Example: A daily newspaper with a town edition and several regional editions with differing supplements. All editions can be preserved as originals in their place of publication while being kept on film in other places, whereby in addition the respective supplements can be kept in the original.

Complete conversion

The following documents and printed works have convertible testimonial quality, without the retention of sample originals being necessary. The value of the external features for the understanding of the user is here so minimal that, insofar as they are not reproducible, they can be dispensed with without loss of testimonial quality.

1. Doctoral theses

Doctoral theses are, due to their particular character as part of an examination, less dependent on external and formal features to support their contents than other publications. Some of them are first produced economically and without a publisher. Pictorial analogue representation can be supplemented by digital textual conversion for further distribution and increased ease of use. The stabilisation of the original form and its permanent evidence require pictorial analogue conversion even in the case of an original digital text.

It can be assumed that in exceptional cases in which for particular reasons the preservation of the original is mandatory, the university where the doctoral examination took place knows and fulfills the respective university examination regulations.

2. Collections of newspaper cuttings

These have usually been made before they are taken over by an archive or library. Their testimonial quality is not connected to external formal features. Their composition and material form, insofar as these are not reproducible, say nothing about their producer. When information is required regarding the publishing organ, this can be found elsewhere.

Blank forms

Convertible testimonial quality suffices where they have been identified as being worth keeping in an archive for special reasons, e.g. in order to reconstruct the grounds for a decision and the manner and kind of information required. Originals are found in the files of the proceedings for which they were designed or used.

3. Printouts of original statistical material

The printout on paper, COM or other analogue form, of data collected and processed by computer means, serves to stabilise and preserve it. If it cannot be used in this form a redigitalisation must be made possible and the preservation of the necessary software guaranteed.

4. Statistical questionnaires

Census questionnaires or forms for business statistics, forms and other questionnaires, are often produced on greatly endangered paper. If they have been identified as being worth preserving conversion suffices as the preservation measure, as it completely reproduces the evidential value.

5. Law gazettes and official printed matter, including parliamentary publications

Should the preservation of the original be necessary by law, this is carried out by the state or regional archive responsible for the territory. Otherwise complete conversion is possible.

6. Address and telephone books

These can be completely converted. Textual conversion endangers the stabilisation of certain historical circumstances. Pictorial analogue conversion can therefore also be used to preserve the contents even where the original was digitally produced.

Additional textual conversion for increased ease of use

An additional textual conversion can increase the ease of use of archive and library material. When employed, care must be taken that the original is not endangered or its condition impaired. Textual conversion takes place by writing down the contents, copying or electronic text recognition. Each of these methods can either unconsciously or consciously alter the text. Textual conversion cannot guarantee authenticity. Authentication, when necessary, must take place externally, as when legal certificates or deeds are legally verified by a notary. In the case of editions this is achieved through the scholarly reliability of the author or publishing institution. Textual conversion and, above all, digitalisation needs an external guarantee of reliability. However, the higher the requirement for reliability, so much more necessary is it that authenticity is externally guaranteed.

Sole effective proof of authenticity can only be given in pictorial analogue form. This is also the case for original digital texts.

1. Doctoral theses

Once their authenticity has been established in pictorial analogue form, the digital text can ensure wider accessibility and use, e.g. in the internet. Full text research and HTML connections in the text make the contents even more accessible.

2. Law gazettes and official printed matter including parliamentary publications

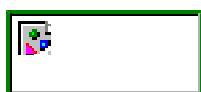
Textual conversion enhances ease of use specially for administrative work and public accessibility. Pictorial analogue form, however, is the only authentic proof of the legal force of the publication.

3. Address and telephone books

These are to some extent published directly in digital form. The digitalisation of old address books could considerably increase their use of ease, but it must be backed up by pictorial analogue representation to stabilise them.

4. Journals

Online subscription of journals or parts of them require pictorial analogue representation as security. Printed or substitute filmed editions enable greater ease of use through user-orientated digitalisation of parts of them.



Procedures for establishing intrinsic value

Remarks

The establishment of intrinsic value for the employment of preservation methods is carried out for existing library and archive collections. Archival appraisal and description or the purchase by libraries and cataloguing have already taken place. Registers and catalogues can therefore be used to survey the collection. Should they not exist, some of the steps are more complicated.

All steps should be documented. This is best done by means of a form, as appended. The documentation should include the results of the analysis, reasons for decisions and explanations. It should be the basis for information in the register or reading room, with which the user and reader is informed about conversions, and where the connections between perhaps different storage areas, signatures and storage media are made clear.

Steps in the procedure

- Establishment of the method of analysis (general, group or individual analysis)
- Preparation for the analysis: division into record groups with common features (time, production factors) or the putting together of the items to be investigated.
- Applying the criteria and establishing the intrinsic value

1st Step

Establishment of the analysis method (general or individual analysis).

Questions:

- Does the material (or group) contain uniform features throughout?
- Does it contain groups of documents with similar features, which can be investigated in general on the basis of samples?
- Is it completely lacking in uniformity?

When one of the following features is present for all items in a group it can be combined and analysed in general on the basis of samples. The initial size of the group should be reduced until a common feature has

been established. If no common feature is found individual analysis must take place:

- Uniform running times for administration documents and uniform production periods in the case of books. These allow conclusions as to uniform paper quality.
- Uniform script form and file forms (such as reference files, single case files, file series, mass uniform parallel files) in archives, and uniform production quality in the case of printed works (hardback, paperback, printout of theses, year of publication, country of publication etc.) in libraries. They indicate the probability of consistent care in the treatment of written material in an administration, and in production quality in the case of printed works.
- Uniform origin of administration documents of official authorities and of certain publishers in the case of printed works. This increases the probability of similar material quality and the form used.
- Uniform causality in written and printed works: documents from a particular field of work often have similarities, just as, for instance grey literature from one particular place of production and from a particular time.

When as many as possible of these four common features are present a general decision on the basis of sample analysis can be made for a group of written material or a collection. It ensures with sufficient certainty the representiveness of the analysis results for the whole group or collection. Where there is no agreement in the four categories a general decision cannot be made. In this case individual items must be examined.

The reason for the procedure used should form part of the documentation for the decision.

2nd Step

Formation of groups which can be analysed in general and the establishment of the criteria to be used.

3rd Step

Identification of those items which are to be preserved in the original and those items suitable for conversion, including documentation of the selection procedure.

Questions:

For the selection of those items of a group to be preserved in the original:

- Where in the collection is there exceptional material which could have market value? Could files contain valuable additional material or postage stamps?
- Can one expect to find old material in the files, such as mediaeval deeds? Are there notes, letters or autographs to be found in the books of an author's library? Are there manuscript versions in a collection of private papers which show the genesis of printed works?
- Are there enclosures or additions of artistic value, such as special bindings, hand-drawn maps and plans, hand-coloured drawings?
- Does the group contain documents which according to the register are of uncertain origin or authorship?
- Are the documents and printed works particularly old or do they span large periods?
- Have the documents or books played a role in particular historical events? Were they used by famous people? Important here is the particular authenticity of the originals, which can allow a direct vivid connection to the events.
- Are there items particularly suitable for display or teaching purposes?
- Are there legal regulations which specifically demand the preservation of the original and do not permit replacement with microfilm forms?

Requirements for filming with special procedures (half-tone and colour film):

- Do the items contain unusual handwritten coloured markings?
- Should watermarks remain visible? For the preservation of samples in the original:

- Are there particular forms of stitching or production forms of books, which are not normally used but are clearly typical for this corpus?
- Are there no similar forms to be found elsewhere?
- Are there much-used form sheets, of which some should be preserved in the original?
- Should in the case of parallel files the typical form be preserved?
- Should for other reference files or book forms a typical sample demonstrate the usual procedures with the documents?

The answers to these questions must be included in the documentation together with the registration codes. Above all, when originals are preserved as samples of categories of written works or books, great care must be taken to ensure clarity for the user. In order to retain the testimonial quality it is important to make clear the connection between the preserved original and the films of the rest of the group.



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