Doceo + mentum = Document - A Medium Concept, Theory and Discipline.

by Niels Windfeld Lund

Our task is not to penetrate into the essence of things, the meaning of which we don't know anyway, but rather to develop concepts which allow us to talk in a productive way about phenomena in nature. (Niels Bohr 1935)

Medium theory would, in contrast to media theory, understand that every theory of media has to be expressed in some medium, and it would not assume that this medium must be linguistic. (W.T.J. Mitchell 2003)

...looking into the distant and perhaps ideal future, we might say that semiology and taxonomy, although they are not yet born, are perhaps meant to be merged into a new science, arthrology, namely, the science of apportionment. (Roland Barthes 1964)

A word and image discussion

In the journal "Word and Image" vol. 17, no. 1 & 2, 2001, the theme is "Printing matters". In the introduction, the guest editors Graham Larkin and Lisa Pon emphasize how "the materiality of printed texts in early modern Europe is inseparable from that of images that were often produced by the same methods and the same people - often even on the same page". Later in the introduction they say: "While we have divided texts and images for reasons of conceptual clarity, we urge the reader to bear in mind the extent to which these stories are intertwined." In a circular diagram, the two editors have tried to summarize their introduction. (W&I-PM p.2) While they have not distinguished between words and images regarding the history of both production and reception, there is a division between descriptive bibliography/sociology of texts and connoisseurship /sociology of images. Why is this division necessary?

The idea of a sociology of texts in a broad sense derives from D.F. McKenzie. In his lectures on "Bibliography and the sociology of texts" he defines texts as including "verbal, visual, oral, and numeric data, in the form of maps, prints, and music, of archives of recorded sound, of films, of videos, and any computer-stored information, everything in fact from epigraphy to the latest forms of discography". McKenzie finds support for his very broad definition of text in its roots of the Latin verb texere "to weave", not referring to any specific material, "but to its woven state, the web or texture of the materials". From this should follow that only one sociology be necessary to mention in the diagram in W&I, a sociology of texts, based on a broad definition of text including words as well as images, however, the editors insist on the need for a special sociology of images. Although Larkin and Pon appreciate the work of McKenzie and his focus on the history of production and reception of texts as recorded forms, they state the following argument for a separate sociology of images alongside a sociology of texts: "As art historians, we are interested in proposing a similarly expanded role for connoisseurship; for present purposes we are calling this a sociology of images in order to reinforce the parallel with McKenzie's outlook." (W&I-PM-Intro p.4) Drawing a parallel between McKenzie's effort to broaden the scope of bibliography and the appraisal of connoisseurship by Henri Zerner in order to "make fine visual distinctions, to identify specific visual features". Larkin and Pon say further in a note: "While there are obvious parallels in the aims of both speakers, Zerner's remarks could serve as a corrective to McKenzie's collapsing of verbal and visual evidence into the category of "text";
any consideration of the materiality of print should respect the inevitable differences, as well as the similarities, between text and image..." (W&I-PM-Intro p.6, note 16)

When McKenzie argues in favor of a broad concept of text, it is due to the efforts of weaving a meaning together no matter what kind of means you are using, in other words a matter of coherence. On the other side, when Larkin and Pon demand a conceptual distinction between visual and verbal means, it is due to the "inevitable" differences between images and words, becoming a matter of diversity and recognition of the uniqueness of each medium. From this follows the traditional conflicts in the humanities between general disciplines like semiotics or cultural studies covering all expressions of meaning and separate disciplines for each kind of means, words being dealt with by literary scholars and images taken care of by art historians. But it is also a demonstration of the classical problem of the relationship between materiality and meaning discussed in terms of relationships between mind and body, between content and expression, or in semiotic terms between the signified and signifier.

**Meaning versus materiality**

Roger Chartier says in an afterword in the same volume of "Word and Image" mentioned above:

> "On the other hand, these same essays caution us against the temptation to invert inherited hierarchies, and thereby privilege the materiality of symbolic productions at the expense of meaning. Joseph Leo Koerner observes that approaches focusing on the modalities of textual and pictorial inscription might be "a way of saving the soul by looking at the material". This is a forceful reminder that the understanding of the meanings invested in works remains the first priority of decipherment. In a sense, then, the hermeneutic project remains entirely in place. And yet, as the present studies indicate, it can only be fully realized by retrieving, in all their singularity, the categories and materialities that give any work its historical identity."

This statement demonstrates an inherent dilemma in the humanities on the relationship between materiality and meaning. Although one recognizes the need of considering the material circumstances of human expressions, material means are considered as something inferior, as a necessary evil for symbolic production. It goes deep into the platonic divide between the ideal and material world, letting the ideal world be superior to the material world, and especially into the cartesian claim that the special quality of human beings are their ability to think, giving thoughts priority above the mere embodiment of the thoughts.

One of the major reasons for not being able to consider both sides of the dichotomies, mind and body etc., as having equal value, is the divide itself. While the mind, meaning and the signified draws in the direction of coherence and homogenity, the body, expression and the signifier draws in the direction of diversity and heterogeneity. If you have three separate letters C-O-W, you will have a coherent meaning of an animal. Your primary interest in relation to meaning is to catch the coherence of meaning contrary to what applies to the means, where it is the right selection of means, the condition of contingency, which matters. That issue may produce new problems in the case of words and images in an analytical as well as in a practical sense, since it may be difficult to make a clear-cut divide between visual and verbal means and modalities. If you use handwritten letters instead of printed ones or make the letters in a QuickTime program and put them on a computer screen, you are making words, but you are also playing with the visual properties of letters, making verbal images. This is just one example of the difficulties of the word and image divide in practice. This has been, still is and may for ever be a core problem for many scholars in the humanities. Words are only in theory something on their own, since they can only be materialized through either visual, auditive or gestural means, turning words into multimedial communication. In the following I will take a look on a few of the prominent scholars, who have been struggling with these problems, Günther Kress together with Theo van Leeuwen, and N. Katherine Hayles.
Günther Kress and Theo van Leeuwen have dealt with these problems in several ways. As they say themselves, they have worked hard on trying to develop **multimodal concepts** in a time where more and more communication, including the arts, goes from monomodality, using one primary medium, to multimodality, using a number of different media. Instead of focusing on stable entities they talk about "practice" and about "how do people use the variety of semiotic resources to make signs in concrete social contexts" (KL-MD preface p.vii). This approach allowed them to make progress in a multimodal approach to how meaning is created. But even if the main focus is on practices and not on fixed stable entities, they have to make a conceptual delimitation of the result of the practice, "the actual material production of the semiotic artefact", no matter how unstable it is. They say: "We want to insist from the beginning that the semiotic instances in which we are interested - the texts - include the everyday practices of 'ordinary' humans as much as the articulations of discourse in more conventionally text-like objects such as magazines, TV programmes. We will refer to these 'practically lived texts' just as much as we will refer to the texts of magazines or the plethora of TV programmes" (KL-MD p.24). Later on they say: "Discursive practices are apparent in action, that is, in their articulation in one or more semiotic modes. We can therefore define a text as that phenomenon which is the result of the articulation in one or more semiotic modes of a discourse, or (we think, inevitably, always) a number of discourses" (KL-MD p.40). It is illustrated through an analysis of "Stephanie's bedroom as a multimodal text". The starting point is an article in *House Beautiful* about a three-year-old Stephanie's room. We are being told that "The pedagogic 'children's bedroom' discourse can be realised in a number of ways. It can be realised as an actual children's room, through the multimodal 'language of interior design'... The same discourse can be realised as a *House Beautiful* article, in the text and pictures of children's books, or in IKEA catalogues." (KL-MD p.17). If you read this last sentence closely, you will notice a different use of the notion of text than in the case of the overarching concept of text, used in the title of the chapter and in the definition mentioned above. In the latter case, the notion of text is used in order to make a distinction between words and pictures. A similar case is on page 115, where an advertisement is mentioned as text in a broad sense and then in the actual analysis, they are talking about "The text below the main picture..." meaning a verbal text in contrast to pictures. Finally when you are reading the following "New ensembles of discourses ensure that the resultant material semiotic object, whether 'textual' or other, is always ..." (KL-MD p.64), I will claim a general inconsistency in the use of the notion of text throughout the book by Kress and van Leeuwen. One may argue that it is not a big problem due to their focus on practice, but one may nevertheless require a conceptual consistency on all levels, especially in a book explicitly devoted to conceptual development. One explanation for this lack of consistency may be the fact that there is no current conceptual alternative to the notion of text as concept for all kinds of results of communicative processes. The question is if one has to live with this conceptual inconsistency for the time being?

N. Katherine Hayles has in several articles and books worked with the impact and consequences of digital technology on especially literature in terms of media. This has lead her to focus on the materiality of literature. In the article on "Translating Media: Why We Should Rethink Textuality" N. Katherine Hayles discusses how we can cope with the consequences of the digital technology on literature by rethinking the materiality of the text. Hayles operates with a number of analytical levels, with different degrees of materiality: work, text and document. A work can be defined as assemblage, a cluster of texts. A text or more correctly the materiality of the text is an "interaction of its physical characteristics with its signifying strategies". (TM p. 277) Finally a document is the physical embodiment of the whole. On the question of whether two documents embody the same text or not, Hayles says: "In some instances a text would remain relatively constant over many documents, assuming that debate agreed that the physical differences between the documents were not important as signifying components. In other instances, there could be as many texts as there are documents." (TM p.278). That means that physical differences only become important, if they are considered important by the interpretators. Hayles says "Neither document, text or work would
be considered immaterial; all would be invested with nuanced senses of their materialities, a viewpoint that would further energize and foreground the discussions of how physical characteristics, verbal content, and non-verbal signifying strategies work together to produce the object called "text". If strong cases can be made for the interplay of physical differences with the two documents' signifying strategies as understood and interpreted by readers, then perhaps they should be considered different texts. The physical difference either will or will not make a signifying difference. It also means that without a physical document, you cannot have a text, nor a work. Through this reasoning Hayles is arguing for the importance of materiality and making a critique of understanding literature as something immaterial by focusing on the role of different media, but in another way than Kress and Leeuwen. While the latter are interested in the interplay between visual and verbal means, the main interest for Hayles regarding media is the difference between the medium of print and the digital medium. Hayles is making an analysis of John Cayley's electronic work: riverIsland, using movies, colors and sound in addition to animated letters. She discusses how this work differs from a printed work by using the digital nature of bits to make the letters. She writes: "At the side of the text in the vertical loop is a QuickTime movie of what appears to be a river running through woods, although it is actually an overlay of separate shots of a pathway" and further on: "To explain the process, he asks in the text file accompanying riverIsland that we imagine two tables of letters. Like in the case of Kress and Leeuwen it seems unproblematic for Hayles to use the notion of text in both a narrow and a broad sense. In both cases there is a strong focus on theorizing materiality and multimediality. Nevertheless, they are both working on one hand with a very explicit broad concept of text based on theoretical discussions and on the other hand with making an apparently rather unreflected distinction between verbal and other (visual) media by the use of the notion of text in a narrow verbal sense. In other words, they are within the same discussion using the same term, text, as a synthetizing concept as well as a distinguishing concept. As art historians Larkin and Pon are criticizing the broad concept of text for neglecting the specificities of visual media, but it is perhaps even more confusing and problematic to use the same concept in two very different ways within the same book or article, especially without noticing it. One may ask if this is a specific problem for Kress, Leeuwen and Hayles? I believe not. It is more likely to be a demonstration of the general problem of the divide between content/meaning and expression/media drawing the concepts in different directions. The major reason for choosing the notion of text as the broad synthetizing concept is its ability to convey a coherent meaning of an expression, across the different media being used in one expression. But that is also its inherent problem, hiding the diversity of media in favor of a coherent meaning, so what to do? Do we have any conceptual alternatives? There are several options. One is to conceive verbal media as something other than text. This seems unproductive since verbal media are very much a question of weaving letters together into words and therefore text is a very adequate concept for the verbal medium. As a general concept one might consider using another concept like representation, symbol, sign system, informational object, artefact etc., to avoid the confusion between expressions using verbal and other media. But for various reasons the notions mentioned do not have the same conceptual strength as text. Representation, symbol, sign system and informational object are all biased towards the otherness, something other than the expression itself. Artefact is on the other side too much biased towards the thingness, meaning an artificial object as such. The conceptual power of text lies in its etymological ground on coherence. Coherence is important for all kinds of human communication in a double sense. You need a minimum of internal coherence to create a meaning and you cannot do that without making some kind of frame, otherwise you cannot identify your meaning. For that reason the notion of text is a very strong concept which may explain its survival and popularity till now despite problems arising from the emergence of new media and technology. The dissolution or break-down of the coherent printed text into digital bits has also led to attempts to adjust the concept of text to the new situation by talking about hyper-text, cyber-text or techno-text. But the question still remains whether it is possible to find a strong alternative concept which is more sensitive towards different media than text? At some point one may consider
the same question as Jacques Derrida raised in 1968 regarding the concept of sign in an interview with Julia Kristeva. Derrida talked about the work on the model of the sign: "This work must be conducted as far as possible, but at a certain point one inevitably encounters "the logocentric and ethnocentric limits" of such a model. At this point, perhaps, the concept is to be abandoned. But this point is very difficult to determine, and is never pure. All the heuristic and critical resources of the concept of the sign have to be exhausted, and exhausted equally in all domains and contexts." I am not arguing for giving up the notion of text as an analytical category in all cases, but it is necessary to make a critical inquiry into the possibility of developing another concept capable of dealing with coherence as well as with the diversity of media. In the following I consider the notion of document as a qualified candidate.

What is a Document?

If you compare the number of theoretical works on concepts like sign, text and representation with the equivalent number of works on the concept of document, the latter is incredibly small. One of the reasons for that may be the inferior status of the notion of physicality within the hermeneutic and semiotic traditions, being defined as the physical vehicle or embodiment of the whole text, notably found in the conceptual traditions in editorial theory and textual criticism. Shillingsburg says: "Documents are physical, material objects that can be held in the hand". In The Concise Oxford Dictionary, a document is defined as: "Thing, esp. deed writing, or inscription, that furnishes evidence". In this very short definition, one finds at least 3 properties assigned to the concept of document. It is a thing, a physical object (in contrast to an abstract object); it is writing, especially legal writing, the dominant administrative and legal medium, and it provides evidence, a proof of truth or the opposite. This definition of document is widespread in society today when you do business or get in contact with authorities. But it has also been challenged by the new information technology, when you can no longer hold a document in your hand, but only see it on the computer screen. The crucial quality of a document being a finite/discrete entity in a material sense is dissolved into a number of bits organized for a short period of time with the permanent risk of crash and disappearance. So it may be very appropriate to ask if a document perspective at all is relevant today. In any case, tracing the use of the word document back in history and making a kind of conceptual archeology, one will realize that document has been understood in many different ways.

The word document and its Latin predecessor, documentum, was from the beginning in antiquity not only something to be held in hand or a piece of written evidence. It was primarily related to teaching and instruction. In 1214 the Latin form documentum is registered as meaning example, model, lecture, teaching, and demonstration. The word document meant until the 17th century primarily "ce qui sert à instruire, enseignement, leçon". An oral lecture or instruction could be a document and may have been the norm and prototype of a document. While this oral document tradition oriented towards educational purposes is almost forgotten today, many would think of the legal conception of the document as being the most original conception going back to antiquity, but it is more related to the emergence of the European state bureaucracy from the 17th century and onwards. In France it is first found in 1690 in the combination of "titres et document" (Rey et. al., p. 620). It is defined as "écrit servant de preuve ou de renseignement" (Rey et. al., p. 620) or "something written, inscribed, etc. which furnishes evidence or information upon any subject, as a manuscript, title-deed, tombstone, coin, picture, etc." (OED vol.IV p.916). From the beginning of European modernity and enlightenment a document is first of all a written object stating and proving transactions, agreements and decisions made by citizens. It was an essential part of the creation of a public bureaucracy across and independent of local customs based on a "droit écrit" contrary to "droit coutumier", laws and rules varying from place to place, being oral or gestural like handshaking agreements on a market place. Secondly, the documents became a matter of proof, a question of whether the statements in the documents are true or not. The crucial question is how
you can be sure about the authenticity of the documents. Many court trials have been and are still dealing with exactly this issue. Thirdly the document is still an issue of "renseignement", of delivering information partly drawing on the earlier educational concept of document. It is a piece of writing which tells you something. These three characteristics can be merged into one central phenomenon in the modern society: written, true knowledge. During the 18th century an essentiel part of the development of the modern bourgeois society and especially its public sphere was that the legitimacy of politics, economy, the court, and science became increasingly dependent on your ability to document your rights and claims.

Following the legal tradition, science began in the late 18th century to be a question of empirical proof and thus "appuyer (une thèse) par des documents (1876)" (Rey et. al., p. 620). During the 19th century the noun documentation created from the verb to document became a key word in administration as well as in science. From now on the quality of scientific work depended on the documentation which the researcher could present for his colleagues and the public. It was no longer enough to make a good narrative or to make good logical arguments without empirical evidence. Scientists as well as humanists, especially historians, must from now on show true positive knowledge by making controlled experiments and collecting documents demonstrating that they have empirical proof as basis for their arguments.

Alongside the development of empirical methods in natural sciences as well as in humanities and the new social sciences, collections of documents were established and organized for researchers in libraries, archives and museums. Around 1900 a bibliographic tradition of documentation was developed into a science of its own, especially by the Belgian scholar Paul Otlet (1868-1944), who together with numerous scholars in all scientific fields worked in theory and practice with these issues in the beginning of the 20th century.

In an essay, Otlet described the scope of the science of bibliography and documentation in the following way:

The scope of this science extends to all written or illustrated documents which are similar in nature to books: printed or manuscript literary works, books, brochures, journal articles, news reports, published or manuscript archives, maps, plans, charts, schemas, ideograms, diagrams, original or reproductions of drawings, and photographs of real objects. The practical aim of the Science of bibliography is the organisation of documentation on an increasingly comprehensive basis in an increasingly practical way in order to achieve for the intellectual worker the ideal of a "machine for exploring time and space.

This bibliographic tradition is still alive in current library and information science where a document is defined as any kind of proof of knowledge, although it has also by its ideal vision of "a machine for exploring time and space" in a paradoxical way led to a paradigmatic move towards an information paradigm away from a document perspective. The ultimate realisation of the great vision is to convert any document into digital bits and place them in the large all encompassing "machine", the computer. This should provide you with "pure" information or content making the document dimension superfluous, since you would now have information within one big framework, the cyberspace of all computers. Nevertheless one of the newest traditions for using the word document as a concept is in fact the digital tradition. When you are using a word processing program, you create a document. But unless you print it out, you cannot hold it in your hands, as Shilllingsburg requires of a document. You cannot isolate the digital document from the program in which it is made or stored. In addition, when you are producing a document on the computer, it is a document independently of whether your writing or drawing is true or not. So it is neither an isolated physical unit nor necessarily a proof of something. So what is a digital document? A digital document is a discrete unit of bits necessary in order to convey something meaningful in a digital environment. The quality, but also the problem of the digital world is that you can have a huge amount of bits, but if you want to use them in a meaningful way, you have to select some of them and frame them as a document. From
this one may conclude that a document need not be a relatively permanent physical object, even if it would be nice if it were so. In fact one of the huge problems in relation to digital documents is exactly the possibilities for storing and preserving a digital document. One of the essential qualities of print and paper-based documents are their sustainable character, a major reason for their dominating position among different kinds of documents. But as I have shown above, this is not a necessary property of a document. According to the oldest conceptual traditions, a document can also be a speech and a gestural movement with your arms or legs. These can only be "stored" and "preserved" by mnemonics with great risk of changes due to variations of how they are memorized by individual humans. Neither does a document have to be a matter of proof. It can be a matter of just showing something. All this may lead to a conclusion saying that a document can be defined in a very broad sense, especially in relation to the different means being used to create the documents, going back to the starting point: the problem of finding a concept for coping with coherence as well as the different means being used.

As mentioned earlier the notion of document goes back to the Latin words documen and documentum. Documen or doci stems from doceo plus men and means a warning, caution, an example or instance. If we look at documentum, it can be separated into the verb doceo and the suffix mentum. According to the Oxford Latin dictionary, it has two original meanings. It means both an example (serving as a precedent, warning, instruction, etc.) as well as instruction and/or teaching.

If you look upon the verb and suffix separately, doceo has five different meanings (OLD p.568):

- to tell, inform (a person of a fact, etc.).
- to instruct (an advocate).
- to demonstrate, show (by argument or other means). b (w. non-personal subjs.).
- to teach (a person a skill, knowledge, etc.) instruct in. b (w.inf.) to teach (a person to do something); (also w. indir. command). c (w.indir.qu.). d (absol.) to act as a teacher, teach.
- to produce a play, etc.

The main difference between the five meanings is related to different social settings for using the verb doceo, such as personal conversation, law, teaching, art. The suffix mentum is used in Latin to form nouns denoting acts, or means and results of acts.

Based on the conceptual history of the word document and its etymological roots, I will define a document in the following way: any results of human efforts to tell, instruct, demonstrate, teach or produce a play, in short to document, by using some means in some ways. In this way the concept becomes extremely broad. Almost anything can be a document. At the same time, it can be very specific. In this way the concept of document may be a qualified alternative to the broad concept of text avoiding the confusion about text as a distinctive concept for verbal expressions as well as a broad concept covering all kinds of expressions.

Going back to the cases of Larkin and Pon, Kress and Leeuwen, and Hayles, we may see if their cases would be different if they had used the notion of document instead of text.

In the case of Larkin and Pon, they could have applied the concept of document as an overarching concept and talked about a sociology of documents, recognizing the important differences between words and images in printed works and focusing on the use of different means to make a meaning. Kress and Leeuwen could have called "Stephanies bedroom" a multimodal document. They could also have talked about "conventional documents like magazines, TV programmes" instead of "conventional text-like objects ..." (my emphasis) etc. They could actually have defined a document as "that phenomenon which is the result of the articulation in one or more semiotic modes of a discourse, or (we think, inevitably, always) a number of discourses". Finally Hayles, by using the concept of document as suggested here, could have avoided the confusing discussion on whether two documents embody the same text or not. Hayles talks about a work as an assemblage, a cluster of texts, but what would happen if she had talked about a work as a cluster of documents sharing a common ground and left the notion of text? Consider for instance one of Shakespeare's
works, Hamlet. There are a lot of documents sharing a common ground, but they would also be
different in a number of ways. One important difference is for instance the difference between the
written versions and the performances. If one considered them as two kinds of documents, one
could compare the different means, phrases vs. gestures, being used to show the same story, the
same work. In order to conceive this "sameness", the common ground, you would only need a
conception for the complex of documents, a work, and a concept of document. You could reserve
the concept of text for the sequence of words in the written versions as well for the verbal dialogue
in the performances. In the same way, it would be possible to consider the work of John Cayley,
"riverIsland" as a multimodal document using movies, colors, sound in addition to animated letters.
In other words, I claim that a use of document as a general concept would improve the degree of
consistency in research on communication and production of meaning using several media, but not
only that. In addition, I think it can contribute to a better understanding of the relationship between
the processes, the practices, and the results of these processes, the objects, the documents.
However, the concept alone does not do the job. In order to have a concept working in a consistent
way, it is necessary to have a theoretical foundation for it. One may say that a concept is "theory at
work". Therefore there will be a need for a theory to make the concepts work.

A complementary document theory

The suggested general definition of a document: any results of human efforts to tell, instruct,
demonstrate, teach or produce a play, in short to document, by using some means in some ways, is
very focused on activities around making documents, in other words on practices. At the same time,
no human efforts to tell etc., no human communication will succeed if there are no results, no
documents, to interpretate or be impressed by. In order to convey this close relationship between
process and product, one may talk about documentation processes resulting in documents. But how
does this conceptual proposal relate to concepts like communication, discursive practices and
signifying strategies and their related theories?

No matter how much you are working on development of concepts, you will never find the ultimate
perfect concept capturing the very essence of everything, since all concepts will be biased in some
way and in principle only be partial in relation to an assumed totality. The Danish physicist, Niels
Bohr, tried to solve this problem by talking about complementary approaches to the totality
highlighting different dimensions of this inaccessible whole. The most famous example is
conveying light as particles as well as waves. Both approaches are equally correct, but it is not
possible to observe them simultaneously.

In a similar way, I want to consider documentation as complementary to communication etc. in
relation to human interaction as a whole, emphasizing certain aspects of human interaction in
general. While communication is biased towards the issue of sharing something among a group of
people by the prefix com-, documentation may be considered to be biased towards the very act of
using some means in a certain way by the two parts doceo, I show... and mentum, by means in
some way, resulting in a document. Documentation stress the inevitable condition that W.T.J.
Mitchell was pointing to in 2003, when he said that every theory of media, and he could have
extended it to any expression, has to be expressed in some medium, and it must not necessarily be
linguistic. Even the illusion of immediacy that Bolter and Grusin are talking about in their book
on remediation has to be mediated in some medium. The same is the case if you are talking about
interaction between two persons. You can either use the body or parts of it like the vocal chord etc.
or make an extension by using a pencil etc. to write or draw your message. So no matter what, you
have to document in order to communicate and the interesting questions are: who is documenting
and how is it being done in different modes, using different means. The main constituents of the
documentation process can be seen as the human agents, the means, the modes and finally the
resulting documents.

Like in all kinds of communication, at least one physical person must be involved as agent in any
documentation process. Even in the case of "automatic" production of poetry, indexes or receipts, a
number of human individuals have to act in creation of hardware, programs as well as starting the machines to make the actual documents. The distinctive difference from similar manual processes is not a matter of whether humans are involved or not, but more about a difference in the social, physical and cognitive role of the human agents in the two cases. Instead of selecting the specific words for a poem, the author of an automatic poetry machine must create a program with a lot of possibilities for combining words into poems. A number of automatic poems may turn up which does not make sense to any audience, to any reader. Although it is the same medium, the words, which are being used in the automatic poem, it is done in a very different mode than if a human person "manually" has selected words and made one poem. The work by John Cayley, riverIsland, is somehow in between the purely automatic poem and the personally authored poem, since Cayley has made a multi-media document, in which some of the media like the animated letters are working almost on their own once started. But they are also only partly on their own, since the automatic lettering is based on one Chinese poem translated by Cayley and transformed into several languages. The special mode being used in this work relates to the single letters as visual characters in more or less transitional form as something in their own right, before they become part of a word and phrases and somehow disappear into a verbal text. They are moving between being texts and images. They are dynamic multi-media documents using different means in different ways, but one should be cautious to consider this as something new caused by the digital media. Throughout history, different kinds of dynamic multi-media documents have been and are still being made using different means in different ways. Today the dialogue of the actors in theater is almost fixed and should be kept in accordance to the written script, but in the first performances of the works by Shakespeare in the renaissance, there was also room for improvisation in relation to the dialogue, to improve the dialogue, before an authorized written version of the work was printed. A theater performance is not only a verbal dialogue. It also includes stage design made by a stage designer, gesturing/moving performance by the actors, and sometimes music by a composer performed by musicians. All these persons are agents in the artistic documentation process responsible for different parts of the whole performance. The crucial question is how this complex process ends in a coherent document. One may discuss whether it is the director or the play writer who is the main responsible for the coherence? It may actually be difficult to decide. Even if the play as a verbal text is coherent, it may become a fragmented disaster as a theatrical document, if the director fails to instruct the actors to act in a meaningful way within the stage design. The case may be the same for movies, when the director has to have everybody involved to work together. Moving to opera, one can follow an interesting development through the history of opera. Today opera is considered primarily a piece of music, but in the early history of opera in the 17th and 18th centuries, either the librettist or the stage designer could be posited as the leading creator of the work, assigning to music and the composer a minor role of the opera in favor of a dramatic story by a writer or a new stage machinery by a stage designer. Even printed documents like newspapers, journals, books and new online documents like homepages are not normally made by only one genius person, but by a group of different people, using a number of media in a number of different modes. Within a conceptual framework of document and documentation process in which all agents, media, and modes involved in human communication are recognized on equal terms in principle, it may be possible to study how the complexes of agents, media, and modes in practice are interacting with each other and thus how material, social, and cultural options and conditions have an impact on the resulting documents. As mentioned in the beginning of this article, Larkin and Pon point to their position as art historians when they are making their arguments, Kress and Leeuwen are embedded in semiotics/semiology which has been biased towards the verbal language, and N. Katherine Hayles is primarily interested in literature, biased towards words. This might not have been a problem if it were not for the fact that it creates problems for accomplishing the general agenda they agree upon, which is to take the multimediality into account in the analysis of human expressions. But instead of making another discipline of multimedia documents like the new media studies, it might be useful to follow the
advice by James Chandler: "... to rearticulate the disciplinary system after three decades of "add-on" fields and programs."

**A new discipline of documentation?**

It is important to remember that the disciplinary landscape is not a static one, almost quite the contrary. Even the most established disciplines like literary studies and art history have a beginning and a history. The history from the late 19th century and onwards of the rise of different disciplines dealing respectively with literature, paintings, music, film and lately games corresponds relatively closely to the development of professional communities for these media, including criticism, professional education with an interest in the development of an academic discipline for their specific medium to insist on their unique qualities in contrast to other media. In the same period there has been a number of attempts to develop disciplines across the borders defined by different media, like semiology/semiotics, cultural studies and media studies, all dealing with conceptualizing the different expressions within one general framework, creating the problems and conflicts over concepts as presented in this article. A reason for this contradictory development may be seen in a paradoxical situation for both parts, on one side a need for in-depth knowledge about the different kinds of expressions in order to do substantial work and on the other side a need for a common conceptual framework enabling comparison and thus arguments for what makes literature different from as well similar to paintings, film, and music. This seeming gap could be bridged by seeing things in a complementary perspective. Compared to the specific disciplines of literary studies, musicology, art history, etc., there are relatively few departments of semiotics around the world. Nevertheless, the few semiotic departments have probably played a major role in the wide acceptance of semiotic analysis through their focus on nurturing the concept of sign and the whole theoretical basis for semiotic studies. At the same time, the practical use of semiotics/semiology within a lot of specific disciplines has been essential and necessary for its position as one of the most important traditions in research within the humanities and social sciences.

In his "Elements of semiology" Roland Barthes said:

> These images, of the sheet of paper as well as of the waves, enable us to emphasize a fact which is of the utmost importance for the future of the semiological analysis: that language is the domain of articulations, and the meaning is above all a cutting-out of shapes. It follows that the future task of semiology is far less to establish lexicons of objects than to rediscover the articulations which men impose on reality; looking into the distant and perhaps ideal future, we might say that semiology and taxonomy, although they are not yet born, are perhaps meant to be merged into a new science, arthrology, namely, the science of apportionment.

One may ask if Barthes envisioned a discipline of documentation in '64, 40 years ago? One of the major problems in the semiological/semiotic tradition remains to be solved, namely how to conceive the complex, but also discrete and coherent result of the signification process, consisting of a number of signs combined in different ways, often made with different media, in other ways than by the concept of text. One solution could be the concepts of document etc. within the broader framework of a theory of documentation as presented above. But as in the case of semiology/semiotics, one needs a "home" for such a broad theoretical and conceptual project, a discipline responsible for the development of the theory, the conceptual framework and a never ending collecting of empirical cases to test the relevance of the whole project. It will surely take time to develop such a disciplinary program. The main object is of course the document, defined as any result of human documentation. In contrast to many other disciplines, documentation studies should be a complementary discipline crossing humanities, social sciences and natural sciences due to the conception of a document and the process of documentation as a physical phenomenon just as much as a social and a cultural phenomenon, drawing on the various methodological traditions.
from these three scientific worlds. It opens for critical studies of documentation forms, including interpretation of existing forms of documentation as well as practical experiments with different means and development of future forms of documentation and new kinds of documents.


4 In her book The Visible Word: Experimental Typography and Modern Art, 1909-1923 (Chicago, 1994), p.34, Johanna Drucker quotes Roland Barthes for the following: "or take a black pebble. I can make it signify in several ways, it is a mere signifier." (Roland Barthes, "Myth Today", Mythologies (New York, 1980), p.113) and she continues: "The black pebble, a stone, a physical object, is being described as a "mere signifier". Barthes takes the position that the signifier is essentially unimportant without a link to the signified, the signifier does not determine or evoke a signified, but is linked to it through arbitrary conventions".

5 In The Visible Word, p.247, Johanna Drucker says: "Recognition of materiality in its operative function, however, allows for an opening in the discourse of logos whose prejudices and biases depend on its claim to a closure which it names as truth, while it also allows for an escape from the reductive claim of imago to a purity to which any associative, referential cultural value would be repellent." See also W. J. Thomas Mitchell, "The Unspeakable and the Unimaginable: Word and Image in a Time of Terror", ELH, Vol. 72, no. 2, (2005): p. 291 "The word/image problem is "inside" the problem of the image, and vice versa" and on p.292 "Signs and senses are interarticulated in the relation of words and images, and part of our work as analysts is to remain aware of these distinctions even as we observe the weaving of their distinct strands in the fabric of representation".

6 Gunther Kress and Theo van Leeuwen, Multimodal Discourse: The Modes and Media of Contemporary Communication (London, 2001), hereafter abbreviated KL-MD. In earlier work they have formulated a visual grammar in order to improve a visual semiotics (Reading Images: The Grammar of Visual Design (London,1996)).

7 The books by N.K. Hayles are among others the following: How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics (Chicago, 1999), Writing machines (Cambridge, Mass, 2002), My Mother was a Computer: Digital Subjects and Literary Texts (Chicago, 2005) and some of her articles are: "Flickering Connectivities in Shelley Jackson’s Patchwork Girl: The Importance of Media-Specific Analysis", Postmodern Culture, 10:2 (January 2000), <http://muse.jhu.edu/journals/pmc/v010/10.2hayles.html> (2005-12-15), and "Print Is Flat, Code Is


16 *The Oxford English Dictionary*, second edition, (Oxford, 1989), vol. IV, creel-duzupere, p. 916, hereafter abbreviated OED. Article "Document: 1. Teaching, instruction, ... 1793 J.Williams Life Ld. Barrymore 101, I have heard much document from the Grey Beards of society, delivered to prove [etc.]. 2. An instruction, a piece of instruction, a lesson; ... 1620 tr. Boccaccio's Decameron 80b, These were his daily documents to his young wife. ...".

17 "Ce verbe [documenter, NWL] a produit documentation n.f. (1870) "action de reunir des documents" et par métonymie "ensemble de documents" valeur devenue très usuelle.

Documentation, dans les années 1930, est devenue le mot-centre d'une activité de recherche et de traitement des documents, organisée à cette époque" (Rey et. al., p. 620).


Even within a digital context, it is often claimed that a document must be perennial; it must last an indefinitely long time in order to be a document, see Manuel Zacklad, *Documents for Action (DofA): Infrastructures for Distributed Collective Practices*, paper at Workshop of the CSCW 2004 Conference, Chicago, Distributed Collective Practice: Building new Directions for Infrastructural Studies, http://tech-web-n2.utt.fr/cscw04/Zacklad.pdf (2005-12-15): "The material vehicle which is associated to the physical effects of the media can be ephemeral or perennial. Ephemeral vehicles only exert a transitory effect on the sense organs of the receptor whereas perennial ones are able to exert a reiterated effect, giving him the possibility to control the triggering of the stimuli. The
documentarisation strategy consist in transcribing or recording the semiotic contents on perennial vehicle and then to equip these supports with specific attributes ... In this context the document designates a semiotic production transcribed or recorded on a perennial vehicle equipped with specific attributes aiming at facilitating the practice associated to its later exploitation within the framework of the preservation of distributed communicational transactions." (p.2)


27 Jay David Bolter and Richard Grusin, Remediation: Understanding New Media (London, 1999), p. 21f. say: "Virtual reality is immersive, which means that it is a medium whose purpose is to disappear. This disappearing act, however, is made difficult by the apparatus that virtual reality requires".


29 Mary Poovey shows in the article "The Model System of Contemporary Literary Criticism", Critical Inquiry, vol. 27, no. 3 (Spring 2001): p.408-438, how literary critics around the turn of the century (1900) promoted the model of "the autonomous literary text" (p.432) and managed to claim a scientific goal deserving a discipline of their own. Today the same request comes from the game world. Espen Aarseth, "Computer Game Studies, Year One", Game Studies: The International Journal of Computer Game Research, vol. 1, no. 1 (July 2001), says "Today we have the possibility to build a new field. We have a billion dollar industry with almost no basic research, we have the most fascinating cultural material to appear in a very long time, and we have the chance of uniting aesthetic, cultural and technical design aspects in a single discipline", http://www.gamestudies.org/0101/editorial.html (2005-12-15).