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Information Design: Textualization, Documentarization, Auctorialization

Manuel Zacklad
Conservatoire National des Arts et Métiers, manuel.zacklad@lecnam.net

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Information Design: Textualization, Documentarization, Auctorialization

Cover Page Footnote

A French version of this chapter has been published in the journal "Communication & Langages".

1 Introduction

The issues relating to digital information design, in all its forms, are without doubt of prime importance in a context where internet and web applications are fundamental to most economic and social innovations. But, unfortunately, the issue of information design is often only addressed from the point of view of graphic development and other expressions, notably information architecture, which tend to take center stage when addressing more structural dimensions. Yet, as mentioned in a recent paper, design is not limited to graphics1. Focusing on the French meaning of the term design, I first intend to highlight the difference between author design and system-oriented design.

System-oriented design, which is what most professional designers do, covers all stages of the design process, which differentiates it from more downstream phases, such as detailed technical design and manufacturing. This upstream design phase requires one to consider the artifacts through several dimensions. Based on several methodological design traditions,[2] one can distinguish different levels of implementation relating, from tangible to abstract, to form, function, user experience or usage and symbolic value. But I will also discuss another criterion to describe the artifact to be designed, making it possible to switch points of view according to the different dimensions of mediation it creates, and that will be discussed in greater detail here: information as content or as text, as an act of language co-producing the selves of the author and the receiver, and as the medium used for gesturality and durable inscriptions, which then constitute a document.

I will begin by reminding the reader of our definition of information, a definition based on an anthropological approach to communication, I will then present the ternary approach to information offered by M. Buckland,[3] which is consistent with the typology I suggest using. Secondly, I will return to the notion of device (*dispositif*) to introduce information and communication devices of which I will give examples. In the third part, I will then address information design in all its

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[1] Manuel Zacklad, 'Design, conception, création : vers une théorie interdisciplinaire du Design.' Wikicreation, 2017. http://www.wikicreation.fr/fr/articles/934.

[2] See for example, Quarante, Danielle. *Eléments de design industriel*. 3rd ed. Paris: Economica, 2001.

[3] Buckland, Michael K. "Information as Thing." *Journal of the American Society for Information Science* 42, No. 5 (1st June 1991): 351-60. https://doi.org/10.1002/(SICI)1097-4571(199106)42:5<351::AID-ASI5>3.0.CO;2-3.

richness and complexity, tackling issues of textualization, auctorialization and documentarization.

2 Information and communication in the semiotics of cooperative transactions

My vision of communication is based on a specific analytical approach of actions and activities, the 'semiotics of cooperative transactions,' the term *transaction* being borrowed from Dewey and Bentley.[4] This reference to semiotics means that my approach follows the semiotic analysis of activity in which narrative is a major structure for cognition[5]. But it does not mean that I intend to only consider semiotic aspects, even though they obviously are a major subject of interest.

Here is my definition of cooperative transactions:[6]

> A cooperative transaction is a pooling of personal and/or collective resources that engage participants, producers and recipients in a common performance associated with the production and/or acquisition of a valuable artifact or work, as well as building their personal experience (Fig. 1). The transaction is undertaken through a succession of alterations transforming resources into a work. The performance is evaluated by assessing both the result, the work, the experience gained by those involved and the contribution they have made. The term performance refers to the description of the action in Greimas'[7] narrative diagram, which comprises of five stages: virtualization, skill, performance, evaluation, compensation. It corresponds to the "actual undertaking of the action made possible by a positive skill."[8] Transactions are somehow proportional, depending on the commitment of each participant in the co-production. In some transactions, the effort is mostly made by one of the participants and the separation between producer and recipient is clear. In antagonistic transactions, the result may be positive for one participant but negative for another. This

[4] Dewey, John, and Arthur, Fisher, Bentley. *Knowing and the Known*. Beacon Press, 1949.
[5] Bruner, Jerome Seymour. *Acts of meaning*, Harvard University Press, 1990.
[6] Also see Zacklad, Manuel. "Le travail de management en tant qu'activité de cadrage et de recadrage du contexte des transactions coopératives." Activités, vol. 10, No. 10-1, April 2013. journals.openedition.org.proxybib.cnam.fr, doi:10.4000/activites.650
[7] Hébert, L. (s. d.). Algirdas Julien Greimas: The Canonical Narrative Schema / Signo - Theoretical Semiotic Studies on the Web. Last viewed on 22nd May 2018 at http://www.signosemio.com/greimas/canonical-narrative-schema.asp
[8] Ibid.

> approach applies to the analysis of both collective and individual activities. In the latter case, the same subject is alternately acting as the producer and the recipient who carries out both intermediate and final evaluations.

The term *communication* is obviously highly polysemic. Notwithstanding its purely technical meanings in telecommunications, it refers, notably in the field of Communication and Information Sciences (CIS),[9] to the communication actions implemented by organizations to address a large internal or external public, and the way in which the media, notably the mass media, contribute to these actions. But in keeping with our chosen pragmatist approach, communication is first considered in the context of interpersonal communication that connects subjects engaged in the production of a common performance, whether it is a daily conversation, a work meeting, a negotiation, an educational session, a scientific debate or political discussions.

Our vision of communication is based on Dewey's definitions, summarized by Quéré:[10]

> Communication refers to interpersonal transactions in which semiotic artifacts, such as the spoken and the written word, play a central role and in which the main component of the experience is the ability to adopt the point of view of others. According to Dewey, language is a "mode of action" in its own right, the meaning of words and the understanding of their meaning being "based on an agreement on both the action and its consequences." This agreement on meaning does not imply that the participants are "in agreement with each other" but that they understand one another as to the range of possible actions and their consequences. The performance of the communication is both linked to the quality of the participants' experience and that of the semiotic productions, even when this communication is partially agonistic, as in certain negotiations.[11]

Communicational transactions are therefore mediated by artifacts whose semiotic function is essential or overrides other functions, these semiotic artifacts being at the center of my definition of information. Among these mediating artifacts, a distinction must be made based on the difference between spoken and written

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[9] In French, the "Sciences de l'Information et de la Communication" are in the same academic department.
[10] Quéré, Louis. *Le modèle esthétique de la communication de John Dewey*. Centre d'Etude des Mouvements Sociaux : OP19, 2014, http://cems.ehess.fr/docannexe/file/3168/porto2014_quere2.pdf.
[11] Ibid.

language. While the gestural media of the spoken word are ephemeral, the written word must use a durable medium. But before exploring these typologies in more detail, let's return to the definitions of information.

In line with the documentary tradition of information science, I will first rely on the ternary vision offered by M. Buckland in his famous article "Information as Thing[12]." Confronted with the multiple meanings of the term *information*, as one can see in the definitions provided by dictionaries, M. Buckland distinguishes between the three main usages of the word:[13]

1. Information as process, i.e. the action of informing;
2. Information as knowledge, i.e. the knowledge communicated about a fact, a subject or an event;
3. Information as thing, i.e. attributing an informative value to objects such as data or documents.

Although M. Buckland is primarily a specialist of document, information and library science, his ternary vision can be applied to both spoken and written communication situations involving recorded information. From my point of view, focused on design activities, the point is, as mentioned in the introduction, to address design information while taking into account the various dimensions of the mediation it operates, which I will develop in more detail here: information as content, as an act of language co-produced by both the author and the recipient, and finally as a material medium for the spoken and written word.

Focusing on recorded information, I will highlight what, in information, pertains to the text, emphasizing the meaning it allows the transmission of, to the construction of the author in his/her relationship with his/her readers and, finally, to the medium and its inscriptions, or to the document, i.e. more or less dynamic material traces that can be subjected to various logistical operations, as in Jeanneret[14] who conditions both social relations and the transmission of meanings. The same analysis could be applied to spoken information, as suggested in Table 1.

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[12] Buckland, ibid.

[13] This ternary approach is reminiscent of R. T. Pédauque's concept of *vu, su, lu* (seen, known, read) (Pédauque, Roger T. La redocumentarization du monde. 1 vol. Toulouse: Cépaduès Publishers, 2007): medium-seen, process-known and knowledge-read. But unlike Pédauque's, Buckland's approach, like the one I have chosen, places documentary issues in the dimension of the information medium, the dimensions of the content (text) and the acts of language (authority) that first characterize information before it can be transferred by metonymy to the document.

[14] Jeanneret, Yves. 'Logistiques de l'écrit.' *Médium*, No. 10, 2007, p. 41-50. *Cairn.info*, doi:10.3917/mediu.010.0041.

Dimension of information in my approach to design	**Information as content**	**Information as act of language**	**Information as medium (+ inscriptions)**
Usage of the term information according to Buckland	Information as knowledge	Information as process (action of informing)	Information as thing
In the chosen approach of information design	Textualization	Auctorialization	Documentarization
Potential variants for the spoken word	Oralization (logos & pathos)	Ethicization (construction of ethos)	Gesturalization, ritualization
Dimension(s) mainly used in CIS	Both (information & communication)	Communication science	Information science
Conventional description of associated devices	Information & communication	Communicational devices (face-to-face)	Informational or documentary devices

Table 1. The Dimensions of information and its variations in different contexts

This ternary approach to information allows one to better position the mathematical theory of information. Although useful in signal processing, it seems quite limited, both because it only focuses on meaning, without considering issues such as interpersonal actions and media, but also because it restricts this meaning to a probabilistic perspective, without addressing the many facets of language semantics, even if these languages are artificial. Restricting the meaning of the term *information* to this theory is counterproductive, even in the area of information system engineering where issues relating to media, interfaces, model expressiveness and programming languages are essential and often far removed from mathematical probability.[15]

[15] Yves Jeanneret is obviously right to underline the difference between the meaning of information in this theory and its meaning in a social context, Jeanneret, Yves. *Y a-t-il (vraiment) des technologies de l'information ?* Revised and augmented edition. Villeneuve d'Ascq, France: Presses Universitaires du Septentrion, 2007.

The anthropological vision that defines information as communication between living organisms by giving a central role to human communication while underlining its diverse meanings, also makes it possible to identify two approaches within information and communication science. An approach that mainly focuses on the social and interactional dimensions of information, which is mainly used in communication science, and an approach that focuses on the medium, the inscriptions and the document, notably in information science.[16] The issues related to meaning are addressed by both approaches: for example, issues of meaning and the diffusion of representations through the mass media are often tackled in communication science, while those related to semantics and documentary research play a major role in information science.

But researchers in library science seem to more often use the term of *information science* rather than other areas of CIS in which the study of interpersonal relationships, organization communication and media studies seems more relevant, to quote only a few examples. But, in media studies, the use of the term *information* to talk about the news does create confusion. One of the reasons is probably that library science has long been using computers and databases, areas in which the influence of cybernetics had led to the widespread use of the term *information* as meant in telecommunications, thus generating many ambiguities. Information science is thus mainly associated, within CIS, with the issues of recorded information management. In the rest of this article, as a rule, the term *information device* will be used in reference to recorded information, while the term *communicational device* will be used for devices focusing mainly on synchronous interactions, especially presential situations.

However, the now widespread use of digital writing as "document for action," which allows for fragmented and dialogical collective writing (in forums, blogs, wikis and social networks) has blurred the boundaries between the traditional meaning of writing, characterized by a certain stability, and the spoken word, traditionally associated with interactivity and dialogue. The progress in audiovisual technology had already allowed for the wide broadcasting of voice and image without, however, becoming as widespread as the internet and the Web. To account for these hybridizations, I will use the term *infocommunicational device* to refer to the unprecedented combination of writing and interactivity, which is characteristic of presential exchanges. Finally, the category of transmedia devices, in the sense I use it, makes it possible to account for the deliberate hybridization between

[16] These inscriptions are also dynamic inscriptions associated with the spread of digital technology.

Type of device	Preferred modality	Artifacts produced through the transaction
Oral and interactive communication device	Interactivity, presential, face-to-face, phone	Oral production
Distant unidirectional communication device	Mass diffusion, audiovisual	Production of non-interactive audio and video content
Informational device (recorded information)	Texts, asynchronous exchanges	Production of texts (written documents, films, music) on a durable medium: documents
Infocommunicational device	Interactive writing, brief news, more or less synchronous online collaborative process	Production of various digital content, often dialogical and fragmentary: documents for action
Digital transmedia device	Hybridization between factual and digital infocommunication	Production of documentarized events

Table 2. Types of information and communication devices

communication devices that articulate the exact spatiotemporal programming of a presential event and its extension in space and time by an infocommunicational device. Before giving some examples of these devices, Table 2 shows a clarification of the meaning I give to this term.

3 Network transaction and the concept of transactional device

All transactions are more or less spread over space and time. Whether it is a design project, a written study report, a file written jointly by several students, a leaflet created by a charity, the minutes of a trial or a complex medical file, in all these cases, conversations and writing are the result of multiple encounters that bring together different contributors according to a variable calendar within specific spaces. The fact of addressing the complexity of the spatial and temporal distribution of actions is one of the criteria that differentiate transactional analysis from interactionist analysis, as stated in my analysis of network transactions:

> Analyzing the action from a transactional point of view is made particularly difficult by the fragmented and distributed nature of transactional

> procedures. Indeed, not only is the realization of a transaction distributed according to different spatial, social and temporal parameters, but a given transaction can trigger others that are more or less always derived from the original one. Using the geological metaphors of Deleuze and Guattari,[17] I will consider that transactions are flows that move at variable speeds and intersect at different points. Any actual situation of activity can therefore be analyzed according to its "genealogy," which places it both within a direct and manifest transactional process, but also according to previous transactional processes that the participants do not necessarily explicitly refer to. [18]

It is precisely to address the historical and spatial complexity of transactions that I have decided to use of the term *device*. As the sociology of science and technology has shown, in our complex system of division of labor, instrumental or value-creating mediating artifacts are the result of highly apportioned design and manufacturing processes, whether they are elaborate semiotic productions or machines, vehicles, information processing systems whose operation relies on a constant supply of services: fuel, electricity, internet, etc. Mediating artifacts are most often "service products" involving multiple hardware (peripherals, software, settings, etc.), documentary (contracts, manuals, help, etc.) and service-related components (connectivity, warranty, after sales support, hotline number, etc.).

Following P. Rabardel's[19] differentiation between the concept of "black box" and "glass box," one can consider that, depending on the situation, information and communication devices are part of a different visibility system for their users. In a routine or smooth course of action, components are combined and closely interdependent, they are transparent in the sense that the black box renders the components invisible. If an unforeseen event occurs or if the participants change the characteristics of the context, the intrinsic complexity of the artifacts once again requires consideration. The black box becomes a glass box that reveals the complexity of its combined components, thus requiring specific attention.

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[17] Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Continuum,1987.

[18] Zacklad, Manuel. "Une théorisation communicationnelle et documentaire des TIC." *Socio-informatique et démocratie cognitive*, edited by Claire Brossaud and Bernard Reber, Hermès science publications-Lavoisier, 2007, p. 20-35.

[19] Rabardel, Pierre. People and technology; a cognitive approach to contemporary instruments. Armand Colin, 1995. HAL Archives Ouvertes, https://hal.archives-ouvertes.fr/file/index/docid/1020705/filename/people_and_technology.pdf.

The same complexity is apparent when considering the human environment, as, contrary to the holistic approach used by the sociology of translation practices or network actors, addressing the subjects as nodes similar to those that constitute technical artifacts does not seem a sufficiently heuristic approach. Of course, during a transaction, the action combines both subjects and artifacts. Of course, there is a codetermination between living organisms and the technical and biological environment. But living organisms, and especially humans, deliberately contribute to creating this environment by introducing artifacts, by associating them, by defining linking mechanisms and interfaces that will eventually be part of black boxes. This environment is mainly the result of intentional design processes that must not only be analyzed through an ex-post observation of the associations between a participant and an artifact.

The selves that make up the human environment are both individual and collective, as humans have the remarkable capacity of switching to the *we-mode*, to use the expression of G. Gilbert,[20] alternating between the *I-mode* and the *we-mode*. The *we-mode* is also variable in scale, the scope of the participants being rearranged according to their multiple affiliations, which often lead to intense negotiation.

Collective arrangements are also the result of very sophisticated contractual and conventional procedures, particularly in the workplace, which comprises of an endless range of roles, positions and mediated coordination and cooperation modalities. Here is a reminder of a suggested typology of the collective arrangements relating to different practices: family, relational, community, organizational, merchant, territorial or ephemeral network, etc. These are more or less deliberate and standardized cultural organizations that condition both the *we-mode* and the *I-mode* within the given community.

The device refers to all the artifacts that mediate the activity of the subjects within collective arrangements where the definition of the selves is negotiated and where added value artifacts are created. These transactions can be distinct or part of a network, more or less distributed in space and time, unique or recurring. When these artifacts have a predominant semiotic dimension, especially in relation to language, the devices become information and communication devices. I always consider devices as mediation devices, in the same way as researchers in learning

[20] Gilbert M. (2003), *Marcher ensemble*, Paris, PUF, quoted by Quéré, Louis. *cems : OP32 / Nature et formes de l'émotion collective*. http://cems.ehess.fr/index.php?3708. Last accessed on June 13th, 2018.

and education, who often refer to "mediated communication and learning devices."[21]

The meaning of the term *mediation* is therefore somehow different from its usage in heritage mediation, as referred to by Jeanneret and Rondot[22], who define mediation devices as specifically intended to convey mediation content in museums. My definition of mediation is based on the sociocultural psychology of Vygotsky[23], who focused on the theory of activity. According to him, thought develops through the internalization of social symbols, including language, which become psychological instruments mediating the relationship of the subject to the environment and to other subjects. In line with this tradition, Peraya differentiates between the mediatization of the subjects' activity performed by the artifacts and the mediation performed by the subject for the benefit of other subjects. Although it is relevant in the area of distance learning, I will not consider it at this stage.

Mediation by the devices between the selves for the benefit of individual activities or collective organizations is based on four interdependent components:

- one or several spaces defined by their architecture and rules of habitation in which transactions take place where subjects and artifacts are distributed;
- one or several temporalities and associated protocols including a duration and a rhythm corresponding to the recurrence of interactions, providing time for collective and solitary activities and allowing for the meeting between subjects and between subjects and artifacts;
- other enabling[24], material and semiotic artifacts,[25] located in space and time, for example furniture, machines used for information processing, power generation, commuting or recording the texts, images and words produced by the subjects, etc. structuring connections by defining different ways of making them visible and audible;
- where applicable, the current status of the work in progress;

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[21] Peraya, Daniel. "Médiation et médiatisation : Le campus virtuel." *Hermès*, No. 25, 1999, p. 153. *Crossref*, doi:10.4267/2042/14983.

[22] Jeanneret, Yves, and Camille Rondot. "Médiation de la médiation au musée du Louvre. Des logiques de recherche au sein d'un projet politique, Abstract, Resumen." *Les Enjeux de l'information et de la communication*, No. 14/1 (2013): 131-47.

[23] Vygotski, Lev Semenovitch. *Thought and Language*. The MIT Press; revised edition (August 2nd, 1986).

[24] I mention "other artifacts" here as space and time, culturally invested, can also be considered as mediating artifacts.

[25] Semiotic artifacts obviously require a material medium. In semiotic artifacts, the semiotic function predominates over other functions. Material functions are less subject to interpretation than semiotic functions, they can more easily be objectified, especially by performing measurements.

- activities of other subjects required for the operation of spaces and artifacts but not part of the main performance.

In this definition, the subjects whose activity is mediated by the device are therefore not an intrinsic part of it. The device partly serves the convergent or conflicting intentions of the subjects while conditioning or "modelling" their activity. The subjects cannot act individually or collectively without the mediation of a device, and their actions, while aiming at a performance that is independent from the instrumental mediation device, the creation of the work, contribute to make it evolve, more or less intentionally, through the appropriation process.

From this point of view, the goal of designing a device is to carry out a performance, using an informational and communicational framework. Information and communication can also be the object of the performance. But, except in extreme cases where the action is highly standardized and the environment particularly stable, this prescription is weak[26] and leaves an important place for subjects' initiatives during transactions.

By appropriating the device, the subjects transform it in a unique way, according to circumstances. In doing so, they transform themselves, their selves use the *I-mode* and the *we-mode*, thus changing their representations and their power to act. The action therefore has three joint goals corresponding to three types of "rationality": the creation of new artifacts responding to needs or desires (substantive rationality), the transformation of the relationships between the selves from an individual and collective point of view (agentive rationality) and the transformation of the devices allowing for action and learning (procedural rationality).

4 Examples of information and communication devices

Following the conventional distinction, although it is not based on any actual theory, between the use of the term *information* mainly to refer to recorded information and the use of the term *communication* to refer to orality (Table 1), I present here some examples of the main types of information and communication devices in order to show the diversity of their formats and their hybridization. These typologies show how the design of digital information in the sense of recorded

[26] Hatchuel, Armand. "Coopération et conception collective - Variété et crise des rapports de conception." *Coopération et conception*, edited by Gilbert de Terssac and Erhard Friedberg, Octarès, 1996.

information is intertwined with other forms of expression that are often complementary.

4.1 Example of interactive communication devices

Interactive communication devices focus, as their name suggests, on interactivity, presential and face-to-face communication. They refer to speeches, conversations and meeting discussions that use gesturality of which orality is a component. Each of these devices involves a space, a temporality and an arrangement of semiotic and material artifacts. For example, in the following forms:

- conversation, chatter, argument;
- in-depth discussion, negotiation;
- formal or ritualized exchange (evaluation, sale, etc.);
- work meeting, brainstorming;
- debate, jury deliberation, project review;
- conference (with Q&A), show, etc.

Like all information and communication devices, they differ according to the type of collective arrangement for which they are intended. A meeting is not of the same nature if it takes place within a family, a community, a company, a political context, etc. Some of these devices are frequently supplemented by texts and relate to the transmedia issue that I will examine below. Telecommunications and the widespread use of the phone led to a first revolution by allowing remote synchronous conversations. It continues with widespread digitization, which offers increasingly sophisticated audio and video conferencing capabilities.

4.2 Audiovisual communication devices

Audiovisual communication devices were relatively few and far between as a technical broadcasting medium before the spread of digital technology. They cover extremely diverse formats for expression that are constantly renewed. After cinema, radio and television invented a wide range of programs that have spread globally, creating structural genres that are partly inspired by presential interactive communication: interviews, talk-shows, debates, spectacles, etc. The participants' roles are obviously rather dissymmetrical, the star system playing a major role among the subjects producing the transactions, presenters and other hosts. Collective arrangements are territorial for public broadcasting and advertising-based for the private sector, they can also be community-based, with numerous interpenetrations. The digitization of content was a real game-changer with the

spread of catch-up TV and other online services. Flow has become a stock of content, with issues often similar to those relating to digital information devices.

4.3 Informational devices

Traditional informational devices use durable media to broadcast content and are documents, as explained in more detail later on. In a dispositive approach, posters, books, articles or reports not only refer to text, but also include all the artifacts and the network of actors that allow for their diffusion. For example, regarding the written word, one can cite the following documents:

- posters;
- monographs aimed at the general public;
- specialized professional or scientific monographs;
- mainstream newspapers and articles;
- specialized newspapers and articles, including scientific articles;
- letters, forms;
- working notes, temporary writing media;
- minutes, reports;
- official statements and texts;
- presentations;
- etc.

To these written documents should be added other formats for expression: compact discs and audio files for sound, photos and videos for images on different analogue and digital media.

Again, the type of collective arrangement to which the formats of expression are intended strongly influences the nature of the devices. A letter does not have the same status in a family or friendly context as in a professional or commercial context. Widespread digitization has transformed informational devices in different areas by enabling access to any content through the internet from almost anywhere on one hand, and by introducing new interactive systems that were previously reserved for interactive communication devices.

4.4 Digital infocommunicational devices

Digital infocommunicational devices are characteristic of the widespread use of the internet and the Web, which extend the digitization of media.[27] They dramatically transform all previous communication and information devices without, of course, replacing them. Their main characteristic is to use digital technology to offer a form of dialogical interactivity in text mode that can be the main purpose of the device or that complements the traditional content available in digital format by allowing comments on the work. They are thus intrinsically infocommunicational. I have provided a detailed typology of digital mediation devices in a chapter of my book devoted to documentary genres[28] in which I introduced the following typology, slightly revised here.[29] These different devices can be found in a "pure" state but are most often found in hybrid formats:

- Publishing device in pull mode: diffusion of digital documents in *pull* mode through documentary portals or multimedia resource libraries that can be consulted on demand and gives users the opportunity to leave comments and reviews.
- Broadcast and publishing device in *push* mode: e-mail correspondence and circulation of digital content that is "pushed" to users via messaging, SMS or mobile applications, using more or less automated workflows, if needed.
- Writing device: asynchronous or synchronous cooperative writing of a document by a small group of contributors, ranging from the comment mode in Office suites to online environments such as Google Docs and Office 365 or Wikis or Open Source services (SourceForge, etc.).
- Contributive device in dialogue mode: characteristic of Web 2.0, they focus more on interactivity than on the production of structured content, unlike the devices above, by aiming at sometimes very large communities of users (discussion forums, blogs, peer-to-peer websites, etc.)

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[27] The term of *information and communication device* or *infocommunicational device* which is the name chosen by our research team to name our laboratory in 2009 "Information and Communication Devices in the Digital Age" is also used in a different notional context by authors like Gardiès to refer to "the links between communication and information, as well as the mediation processes, which is translated by the integrative denomination of *informational device* and *communicative device*." Gardiès, Cécile. *Dispositifs info-communicationnels de médiation des savoirs: cadre d'analyse pour l'information-documentation*. University of Toulouse 2 Le Mirail, October 2012. *HAL Archives Ouvertes*, https://hal.archives-ouvertes.fr/tel-01725359.

[28] Manuel Zacklad; "Genre de dispositifs de médiation numérique." *Les genres de documents dans les organisations, Analyse théorique et pratique*, edited by Louise Gagnon-Arguin et al., PUQ, 2015, p. 145-83

[29] This list also contained the transmedia devices introduced in the following section.

- Contributing device in platform mode: unlike the previous device, the main objective of the platform is not interpersonal communication but connecting participants in order to produce services in a context of collaborative economy and participatory and evaluation sciences.
- Attention-oriented device in flow mode: linked to digital social networks (Facebook, Twitter, Instagram, Pinterest, LinkedIn, etc.), they result from the intensification of contributive devices and become the main channel for advertising. Their specificity is the quasi-monopolistic position of the main players and their operation inspired by teleprinters, constantly updating information to capture users' attention.

Infocommunicational devices also vary according to the type of collective arrangement. For example, social media (a contributive device in flow mode) organizes mediation differently whether it is intended for the general public, a company or a community dedicated to achieving shared objectives.

4.5 Transmedia digital devices

Hybrid digital transmedia devices are professional transmedia devices as I define them[30], i.e. not restricted to the entertainment industry. I differentiate between (1) documentary transmedia, a link between several documents in different media contexts or between media, converting speech to text and vice versa; visualization of sound, etc. (2) deep-rooted transmedia, a link between a document and other spatiotemporal components of the environment-medium (GPS tracking, IoT, augmented reality, etc.) and (3) hybrid transmedia, a link between all the components of the integrating environment-medium, in the most challenging situations, temporal programming, for example in the management of an event. Unless otherwise stated, the term *digital transmedia device* always refers to hybrid transmedia here.

When considering network transactions with a certain time depth, most information and communication devices are, in fact, intrinsically transmedia, notably when they combine a communicational device, a meeting and an informational device, the documentary report of this meeting distributed to other actors who were not initially part of it, then archived within an organization. They are transmedia in the case of a medical consultation preceded and extended by a text in the patient file or when,

[30]Manuel Zacklad "Organisation et architecture des connaissances dans un contexte de transmédia documentaire : les enjeux de la pervasivité." *Études de communication. Langages, information, médiations*, No. 39, December 2012, p. 41-63.

in the classroom, teaching uses, as it has for a long time, presential interactions, textbooks and students' notebooks.

But in the latter case, for example, the association between communicational and informational devices is the object of ad hoc management by the teacher who implements a meta-device combining several information and communication devices that, at least for information devices, were not specifically designed for this purpose: link between notebook and textbook, link between textbook and presential interactions, link between notebook, textbook and students' work, etc. The implementation of the meta-device constantly requires the teacher's guidance and the students' and parents' collaboration to remain coherent.

In contrast, transmedia devices are specifically designed to allow for the dynamic combination, on one hand, of communicational devices based on presential encounters and the supporting environment, i.e. space architecture and temporal programming, and on the other hand, of various infocommunicational devices made available before, during and after the exchange. Louise Merzeau[31] provides an excellent illustration of the broad meaning of the term *hybrid transmedia* used for event-based devices that I introduced in 2012[32] and complements its conceptualization through the analysis of the device used for the New Industrial World Forum organized by IRI and various partners, in what she describes as "the editorialization of an event." She shows how this device manages to create a before, a during and an after by combining spatial and digital places.

The success of transmedia approaches therefore allows us to describe the way in which activity flows are supported by complementary information and communication devices. This description is particularly suited to the analysis and design of service activities involving digital applications that now play a major role in today's innovations. It is widely used in user experience design, which precisely aims at seamlessly integrating the recipient's interactions with the points of contact of the service device, which correspond to the steps followed during the co-production of the service.

[31] Merzeau ibid.
[32] Zacklad ibid.

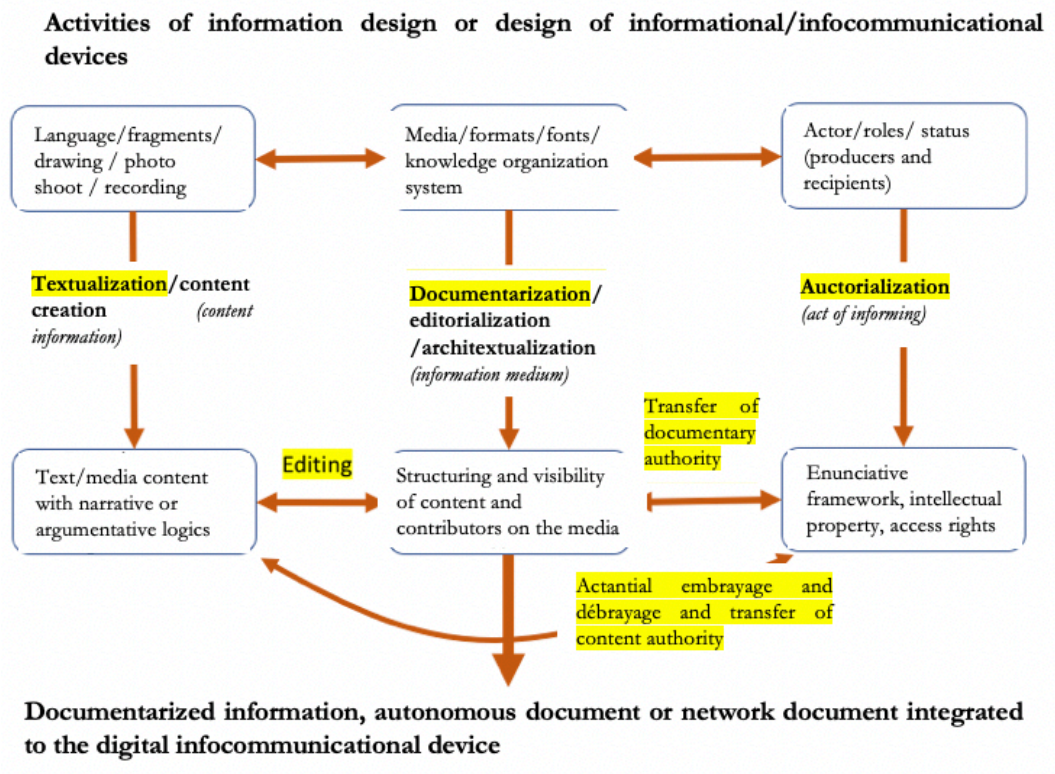

Figure 1. The Three driving forces of information design

5 The three driving forces of information design: textualization, auctorialization and documentarization

We are now able to address the issues of information design in all their depth and complexity, without being limited to graphics, considering that our target encompasses information augmented by the interactivity of infocommunicational devices, as by the integration of these devices in transmedia configurations. As I pointed out in the introduction to this article, I would like to emphasize the need to approach information through various perspectives (information content, information medium, act of informing) to better understand the dispositive dimension, rather than the issue of implementation levels (form, function, use, symbol) that could prolong this analysis. Moreover, I am referring here to recorded information but oral information, and communication devices could be the subject of a similar analysis. Figure 1 shows the different points of view that will be developed later on.

6 Textualization or informational content

Textualization refers to writing or more widely to the production of content intended to be recorded on durable media. The text renders an experience in order to create new ones. The concept of text or content is very broad: it can be different types of texts, diagrams, drawings, images, video, music and any combination of these formats for expression.

Textualization includes all operations associated with the production of this content. It often uses existing content that it reassembles in a unique way, this content resulting from a search for information or documentation. Each format for expression or language has a syntax, semantics, and associated style rules. Their study is mainly undertaken by specialties other than information and communication science, whether it is literary studies, film studies or language science. I will thus not attempt to describe them here. Instead, I will focus on the interactions between content production processes and the other two processes that are key to information design, auctorialization and documentarization, which allows for the integration into the medium.

7 Auctorialization or the act of informing: building selves through texts and documents

In any cooperative transaction, there is a double construction of the selves and of the mediating artifacts, notably those of the mediating artifact that is the object of the performance and that I call the work, and the enabling mediating artifacts corresponding to the device. The repetition of these transactions contributes to the progressive construction of the self, which is based on various types of role-taking. The self notably derives its creativity from its involvement in the multiple transactional situations in which it participates, these situations being part of various collective arrangements. The construction of the self through verbal interactions has been described by many authors. E. Goffman[33] talks about constructing identity through daily interactions. Lave and Wenger[34] emphasize the importance of legitimate peripheral participation for integration into communities of practice, which is undertaken primarily through verbal interactions.

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[33] Goffman, Erving. The Presentation of the Self in Everyday Life 1: The Presentation of the Self. Anchor; 1st edition, June 1st, 1959.
[34] Lave, Jean, and Etienne Wenger. *Situated Learning: Legitimate Peripheral Participation*. 1st edition. Cambridge England; New York: Cambridge University Press, 1991.

The same processes come into play in distributed transactions that are mediated through recorded information. For me, auctorialization is the process by which identities are constructed through texts and their documentary media: textual auctorialization, becoming an author through text, documentary auctorialization, becoming an author through documentarization. Among the manifestations of identity, the authority of the information producer is often put forward. Auctorialization is therefore often treated as a transfer of authority from the role of the producer of information in a collective arrangement with the text and the document. Transfers of textual authority are revealed through quotes or the adoption of an enunciative structure or style associated with certain roles. The author is a mouthpiece who arranges the voices of different bodies to establish his own. In documentary auctorialization, the authority expresses itself through the choice of media and editorial genres, the use of the signature of an institution and its logo, etc. (see Figure 1).

7.1 Textual auctorialization: actantial *embrayage* and *débrayage*

The production of text requires modelling the actantial positions of the producer who positions himself in relation to his readers as a legitimate member of a community or as an independent subject who takes total responsibility for his subjectivity. He can express himself in the first person, as a narrator, or remove any trace of subjectivity, relying in particular on standardized knowledge organization systems, administrative forms for example. To describe this relationship of reciprocal influence between textualization and auctorialization, I will use the terms of *actantial embrayage* and *actantial débrayage* introduced by Greimas and Courtés.[35]

One way to approach these rather complex notions is to rely on the interpretation provided by Denis Bertrand[36] quoted by Fiorin.[37] Embrayage is defined as follows:

> It [this operation] 'consists for the subject of speech to state the deictic categories that designate him/her, the 'I', the 'here' and the 'now': their function is to manifest and cover the 'imaginary place of enunciation' though the simulacra of presence of I, here and now. These categories are

[35] Courtés, Joseph, and Algirdas Julien Greimas. *Semiotics and language: an analytical dictionary*. Indiana University Press (January 1st, 1983).
[36] Bertrand, Denis. *Précis de sémiotique littéraire*. Paris: Nathan Université, 2000.
[37] Fiorin, Jose Luiz. "À propos des concepts de débrayage et d'embrayage : les rapports entre la sémiotique et la linguistique." *AS - Actes Sémiotiques*, February 15th, 2016. http://epublications.unilim.fr/revues/as/5605.

> defined by their relationship and their opposition to the categories subject to débrayage. [38]

On the other hand, débrayage is:

> the possibility of using them, then and elsewhere, i.e. to leave the inherence to the self and apprehend subjects and things that are unrelated to the speech situation, as in an objectifying projection. (pp. 58-59) [39]

Cardon and Delaunay-Téterel[40] clearly show how, in blogs, "in the world of amateur self-production, the separation of the person and his/her work is always a crucial stage, often difficult to negotiate." They also consider blogs as relational techniques of self-production.

7.2 Documentary auctorialization

In parallel with the interactions between auctorialization and textualization, many issues are related to the choice of environment-medium within the devices. For example, several authors have examined the way in which the paper book, considered as the emblematic network device of creative writing until the end of the 20th century, is now competing with the new editorial devices of the digital age, as emphasized by Neeman et al. or Candel and Gkouskou-Giannakou.[41] If one follows these authors, one can consider that each informational device carries specific forms of auctoriality. If these authors did not really address administrative and corporate writings, it is possible to generalize their approach and consider that each informational device lists the producers of content as legitimate authors in a given collective arrangement, whether community-based, organizational, corporate or territorial.

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[38] Ibid.
[39] Ibid.
[40] Cardon, Dominique, and Hélène Delaunay-Téterel. "La production de soi comme technique relationnelle." *Réseaux* no 138, No. 4 (December 1st, 2006): 15-71. https://doi.org/10.3917/res.138.0015.
[41] Neeman, Elsa, Jérôme Meizoz, and Claire Clivaz. "Culture numérique et auctorialité : réflexions sur un bouleversement." *A contrario*, No. 17 (August 17th, 2012): 3-36 and Candel, Étienne, and Pergia Gkouskou-Giannakou. "S'instituer par l'écriture en ligne." *Communication & langages*, No. 192 (2017): 19-26. https://doi.org/10.4074/S0336150017012029.

The current context, characterized by the generalization of documents for digital action[42], gives rise to new forms of auctorialization. Among these, Broudoux[43] notably identifies one of these forms that she calls "authoritativity" and defines as the "*attitude of producing and publishing texts, self-publishing or publishing on the WWW, without seeking the consent of reference institutions in the printing industry*." According to Broudoux, the new digital mediation devices also make it possible to highlight the "informational authority" combining four types of authority: the enunciative authority associated with the author's name and reputation, the authority of the content defined by the editorial genre, the authority of the medium and the authority of the group or institution that reinforces the author's legitimacy[44]. I will adopt a slightly different perspective here. Authority is only one of the dimensions of the identity staged through auctorialization. When considering this aspect, one distinguishes the source of the authority associated with the author's position in the group or the institution (relations of power, influence, expertise), its manifestation in information devices, through textual or content auctorialization on one hand, and documentary auctorialization on the other. Documentary auctorialization includes all the facets of documentarization: auctorial, editorial, diffusion-related and appropriation-related (see below).

In the digital context and especially on social media, the issues of documentary auctorialization are related to digital identity,[45] digital presence[46] and/or digital reputation[47] that partly depend on algorithmic calculations based on "likes" and "retweets" as do Search Engine Optimization strategies. According to Camille Alloing, reputation differs from informational authority as it is a "meta-opinion" aggregating different aspects of popularity or visibility within a community. I consider this approach as similar to the issue of diffusional documentarization (see

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[42] Op. Cit. Zacklad 2005.
[43] Broudoux, Evelyne. "Autoritativité, support informatique, mémoire." *Journées « hypertextes, mémoire, fiction » Montréal, November 2003*, October 31st, 2003. https://archivesic.ccsd.cnrs.fr/sic_00001137/document.
[44] Broudoux, Evelyne. "Construction de l'autorité informationnelle sur le web ." In *A Document (Re)turn: Contributions from a Research Field in Transition*, edited by Roswitha Skare, Niels Windfeld Lund, and Andreas Värheim, 12. Peter Lang, 2007.
[45] Ertzscheid, Olivier. "L'homme, un document comme les autres." *Hermès*, No. 53, 2009, p. 33. *Crossref*, doi:10.4267/2042/31473.
[46] Merzeau, Louise. "Présence numérique : les médiations de l'identité." *Les Enjeux de l'information et de la communication*, 2009, No. 1 (2009): 79-91.
[47] Alloing, Camille. "La fabrique des réputations selon Google." *Communication & langages*, No. 188 (2016): 101-22. https://doi.org/10.4074/S0336150016012060.

below), that of booksellers, librarians or even journalists who make content visible to a given audience from different editorial sources.

8 Information as medium and the division of documentarization: auctorial, editorial, diffusional or aimed at appropriation

We are now able to clarify the definition of documentarization offered above. Let's first remember that documentarization can be internal or external. In the first instance, it mainly focuses on the organization of semiotic fragments within a coherent semiotic production unit – a book, a report or a blog – in an informational mediation device to facilitate reading and interpretation. In the second instance, it mainly aims at connecting several semiotic production units in order to classify them in relation to each other to facilitate their access.

Of course, with digital technology and the widespread use of hypertext links and writing in content management systems hosting forums, blogs, wikis and social networks, defining coherent production units is an issue in its own right, which I will not be able to address here. But overall, one can still consider that some internal knowledge organization systems are mainly dedicated to facilitating reading while external systems aim at facilitating classification and research from "outside" the text, even if, from a technical point of view, the two functions now tend to mingle.

Therefore, while the function facilitating navigation within the semiotic content is mainly used for internal documentarization, the functions allowing for the identification of the transactional context and the connection with other documents serve both internal and external documentarization. Here are some Knowledge Organization Systems that illustrate these different functions:

- navigation aids: paragraphs, page breaks, page numbers, titles and subtitles, bold fonts, frames, table of contents, internal hyperlinks, indexing by internal search engines, collection-specific page template, etc.;
- identification of transactional context: authors, publication dates and places, modification dates, issuing department, etc.;
- links to other documents: quotes, footnotes, bibliography, external hyperlinks, annotations by classification systems, subject indexing, automatic indexing by search engines, etc.;

The "fluidity" of digital media allows for the generalization, at an affordable cost, of redocumentarization practices in the specific sense I give to this term:

"Redocumentarization means documentarizing a document or a collection again by allowing a recipient to reorganize the semiotic content according to his/her own interpretation and his/her usages both internally (...) and externally (...). In this context, digitization offers unprecedented opportunities for re-appropriating documents and records to meet the needs of new recipients." [48]

Whatever the technology used by the medium, whether it is paper or digital technology, the design and production of informational devices requires a complex division of labor. The main difference introduced by digital technology is that, at some stages, design is almost concomitant with production, both during the final formatting of the text and the large-scale diffusion of the content. Today, in many industries, authors themselves often format the text that will be distributed without having to go through the usual intermediate steps. But they often use models, templates, Architexts[49] and knowledge organization systems that have been designed by other actors.

Similarly, content management systems and social networks make it possible to instantly distribute formatted texts to a large audience without going through the lengthy process of printing them on paper. This trend is even more visible in companies and administrations. Action-oriented documents using messaging,[50] content management and cloud-based collaborative authoring systems allow for rapid co-design and equally instant diffusion of semi-structured information, which plays a key role in high added value tertiary activities. But, referring almost directly to the steps and skills that were often used in pre-digital information devices, a careful analysis reveals a complex division of labor in the design of digital devices corresponding to different dimensions of documentary information design. I have highlighted five main documentarization roles or positions that extend textualization to allow for content structuring and diffusion: author, editor, printer/programmer, distributor and reader.

The first three, author, editor and distributor, correspond to the task of information or meta-information design for the distributor. Despite its importance, I will not

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[48] Zacklad, Manuel. "Réseaux et communautés d'imaginaire documédiatisées." *A Document (Re)turn*, edited by Roswitha Skare et al., Peter Lang, 2007, p. 279-97. *HAL Archives Ouvertes*, https://archivesic.ccsd.cnrs.fr/sic_00180185.

[49] Jeanneret, Yves, and Emmanuël Souchier. "L'énonciation éditoriale dans les écrits d'écran." *Communication & Langages*, vol. 145, No. 1, 2005, p. 3-15. *www.persee.fr*, doi:10.3406/colan.2005.3351.

[50] Zacklad, Manuel. "Documentarization Processes in Documents for Action (DofA): The Status of Annotations and Associated Cooperation Technologies." *Computer Supported Cooperative Work (CSCW)*, vol. 15, No. 2-3, 2006, p. 205-28. *link.springer.com*, doi:10.1007/s10606-006-9019-y.

address the role of the printer/programmer here, due to lack of time. It is carried out in the downstream design phases, which are not directly related to system-oriented design in the sense I use here, even though the interactions between content management system or platform programmers and designers can play a major role.[51]

One of the most obvious differences between digital and paper devices is that authors and readers can act on media, which are writing, editing as well as distributing environments, and can impact the latter more directly and quickly than when using the more traditional collective arrangements of the printing industry where supply and demand regulation is much slower. Here is a short description of these different roles:[52]

1. **Author, auctorial documentarization:** the author is obviously in charge of most of the textualization work, whether it is writing or other forms of expression. But he/she also participates in the formatting and structuring of the text, i.e. documentarization. This is also the role of the editor who often selects Architext templates, style sheets, form fields, etc. The author is nevertheless at the center of knowledge organization regarding the text he/she is producing, notably the framework, and his/her writing is directly impacted by annotation tools, especially typographic ones, which allow him/her to organize his/her thoughts: paragraph, title and subtitle marks, references, etc.[53] The potential conflict between the author's and the editor's knowledge organizations is at the center of the editorial issue I will discuss below.
2. **Editor, editorial documentarization or editorialization:** the editor oversees the structuring of a collection of texts to integrate them into coherent categories. This task is essential for engaging recipients and facilitating appropriation, notably for categories such as school or university textbooks, travel guides, cookbooks, user manuals, dictionaries, scientific

[51] The configuration and formatting of text using tags, colors and fonts are the responsibility of designers, even if the collaboration of IT specialists can be required to adapt the final result to software environment-media.

[52] You can find a table showing a partly updated version of these roles in a digital context in Manuel Zacklad "Participative documentary spaces and governance." *International Journal of Sustainable Development*, vol. 11, No. 2-4, January 2008, p. 247-61 or Espace documentaire participatif et gouvernance. 2007. hal.archives-ouvertes.fr, https://archivesic.ccsd.cnrs.fr/sic_00202423/document.

[53] Kembellec, Gérald, and Bottini, Thomas. "Réflexions sur le fragment dans les pratiques scientifiques en ligne : entre matérialité documentaire et péricope." In *20° Colloque International sur le Document Numérique : CiDE.20*. Villeurbanne, France, 2017. https://hal.archives-ouvertes.fr/hal-01700064.

articles, etc. The transition to digital requires a transposition of these categories, taking into account the new tools made available by this technology and the creativity of content management system developers. The difficulty of the current context is that the new categories specific to "ecrileitura[54] are not yet stabilized, even if one can identify new editorial categories, for example blogs[55]. In the fluctuating terminology of internet job titles, the content manager, i.e. the author, is often closer to an editorial manager and sometimes takes on the responsibility of writing and defining the editorial line. But the bigger the company, the more specialized the roles tend to be.

3. **Bookseller, librarian, indexing engine, diffusional documentarization:** booksellers, librarians and newsagents are in charge of distributing but also of allowing access to a very large number of documents targeting a very diverse audience by carrying out diffusional mediation[56]. This provision is at the crossroads between epistemic and commercial purposes, especially in the case of booksellers whose activity is increasingly carried out online. External documentarization, in particular when explaining the context in which the document was produced and searching for knowledge organization systems capable of guiding the reader, is at the core of these roles and of the relevant skills. This is an area in which the metadata standards of library science (e.g. UNIMARC) play a vital role. In a digital environment, it adds to semantic web initiatives and linked data formats. It also corresponds to new indexing and community management roles.
4. **Reader, documentarization aimed at appropriation:** in the printing industry, the ways in which readers took ownership of the medium, the annotations they wrote on its pages, were undertaken in private, except in libraries where the same book read and annotated by a reader was borrowed by another reader. In a digital environment, the specificity of

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[54] The word *ecrileitura* (writing-reading) was coined in 1992 by Pedro Barbosa, Portuguese researcher in information science in his thesis entitled *Metamorfoses do real. Criaçâo literaria e computador* (1992), see also: Kembellec, Gérald, and Évelyne Broudoux, publishers. Écrilecture augmentée dans les communautés scientifiques : humanités numériques et construction des savoirs. ISTE Editions, 2017.

[55] Cardon, Dominique, and Hélène Delaunay-Téterel. "La production de soi comme technique relationnelle." *Réseaux*, vol. No. 138, No. 4, December 2006, p. 15-71. *Cairn.info*, doi:10.3917/res.138.0015.

[56] Payeur, Cécile, and Manuel Zacklad. "Dispositifs d'articulation entre espaces physique et virtuel pour accéder à l'offre de presse." *Études de communication. langages, information, médiations*, No. 30, October 2007, p. 39-53. *journals.openedition.org.proxybib.cnam.fr*, doi:10.4000/edc.446.

> infocommunicational devices is to display readers' comments directly on blog platforms or social networks. On these platforms, monitoring their "audience" is a major concern for authors. This trend is even more visible in social networking platforms where "likes" are used by moderation algorithms to display certain articles to other users. In return, these annotations can be directly used by authors, editors and distributors.

One of the specificities of the digital system is that the author often undertakes the editorialization and diffusional documentarization, which may suggest that these distinctions are no longer relevant. But while some talented enthusiasts, researchers, journalists or bloggers manage to successfully undertake all these tasks, in many industries, they are still carried out by clearly identified professions. Moreover, whatever the context, as soon as one leaves the extremely formatted environments of the main digital social networks, there is still a distinction between publishers designing templates, formats and Architexts, and authors, as there is between administrators in charge of defining access and writing rights and editors and authors.

9 Conclusion: editing conflicts, confrontation between auctorial and editorial authority

In the many professional contexts where there is still a division of labor between those responsible for textualization and those in charge of editorial and diffusional documentarization, or in the case of an individual who may change roles as his/her project progresses, the management of the interactions between textualization and documentarization processes corresponds, in my view, to the issue of editing. Depending on the medium, editing or revision, standardization or mastering refer to the adaptation of the text to the structure supported by the medium, a structure which, as we have seen, corresponds to more or less explicit choices of knowledge organization. This adaptation can take very different forms depending on the level of standardization of the transaction and the devices that it mediates. In the written word, one can think of various formats such as questionnaires, forms, master plans, style models, formats, templates, patterns and other predefined documentary structures.

Potential conflicts between textualization and documentarization are most often linked to editorial documentarization or editorialization. As you may know, this term has experienced renewed interest due to the multiplicity of its meanings,

ranging from the "editorial enunciation" promoted by E. Souchier[57] to the all-encompassing meaning promoted by Vitali-Rosati,[58] following in the footsteps of Bachimont,[59] which in fact corresponds to the definition of redocumentarization I have provided above,[60] that of B. Guyot[61] and of course my own definition of "editorial documentarization."[62] Although E. Souchier[63] does not consider the notion of document to examine the function of the media, his definition, summarized below by Pascal Genêt,[64] seems the closest to mine:

> From a semiological point of view, editorial enunciation is based on two characteristics: the plurality of the instances involved in the constitution and mediation of a text (author, editor, media, etc.) and the dissimulation process of editorial enunciation marks through what Souchier describes as the 'image of the text', that is to say 'an inter-determination of meaning and form [...] which actively participates in the elaboration of texts' (Souchier, 1998, p.138). Editorial enunciation therefore forms a 'second text' insofar as 'the signifier is not constituted by the words of the language ('primary text'), but by the materiality of the medium and the writing, the organization of the text, its formatting' (Souchier, 1998). This concept makes it possible to understand 'the image of the text' as the result of an overall process: from the intentions during creation and formatting (the role of the editor in writing) to the influence of the imprint of the materiality of the media on usages and practices (the role of the publisher in reading).

However, what is perhaps missing in E. Souchier's approach, who mainly focuses on the form of the text and the typographic dimension of documentarization, is the fact that editorialization, like other forms of documentarization, is not exclusively

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[57] Souchier, Emmanuël. "L'image du texte pour une théorie de l'énonciation éditoriale." *Les cahiers de médiologie*, No. 6, 1998, p. 137-45. *Cairn.info*, doi:10.3917/cdm.006.0137.
[58] Vitali Rosati, Marcello. "Qu'est-ce que l'éditorialisation ?" *Sens Public*, March 2016. *sens-public.org*, http://sens-public.org/article1184.html.
[59] Bachimont, Bruno. "Nouvelles tendances applicatives : de l'indexation à l'éditorialisation." *L'indexation multimédia : description et recherche automatiques*, edited by Patrick Gros, Hermès science publications-Lavoisier, 2007.
[60] Ibid, Zacklad 2007a.
[61] Guyot, Brigitte. "Processus éditorial : faire passer un document d'un monde à l'autre." *Où va le travail à l'ère du numérique ?*, edited by Anne-France de Saint-Laurent Kogan and Jean-Luc Metzger, Mines Paris, les presses-Paristech, 2007.
[62] Zacklad, Manuel. *Espace documentaire participatif et gouvernance*. 2007. *hal.archives-ouvertes.fr*, https://archivesic.ccsd.cnrs.fr/sic_00202423/document.
[63] Souchier, Emmanuël. "L'image du texte pour une théorie de l'énonciation éditoriale." *Les cahiers de médiologie*, No. 6, 1998, p. 137-45. *Cairn.info*, doi:10.3917/cdm.006.0137.
[64] Genêt, P. (s. d.). Énonciation éditoriale. Last viewed on October, 3rd 2018, at http://ressources-socius.info/index.php/lexique/21-lexique/190-enonciation-editoriale

a process of dissimulation by which author, editor and distributor, through the formats of Architexts, influence the meaning of the text in a way that is difficult to identify by the reader but also by themselves, as they are subjected to the choices previously made by software publishers. Without questioning the validity of this vision, it is necessary to also consider the fact that editorialization and other forms of documentarization may, on the contrary, be a deliberate, explicit and arrogated process aimed at transferring content or documentary authority by exploiting the codes of a genre to serve one's interests.

And editorialization is not only typographic. It is the production of a specific paratext dedicated to the logistic and intellectual management of the medium, of which typographic form is only one dimension. In digital environments, the documentary paratext, which encompasses a wide variety of metadata belonging to more or less standardized knowledge organization systems, contributes to the form of the text but also to its indexing, its "findability," its "navigability" and its visibility in the networks. As it is often generated automatically, at least in part, which attests to the partly concealed nature emphasized by E. Souchier, its volume tends to be as important as the plain text itself, which can be impossible to interpret if it is not documentarized.

As I have already pointed out, among the various actors who contribute to documentarization, the editor's function is to manage the coherence of collections of semiotic production units, by defining reference genres that will facilitate appropriation by the reader, but also textualization, the role of the author. The editor's authority is mainly based on documentary auctorialization and results from his/her role in collective arrangements specific to certain industries or sectors. For example, editorialization can have a territorial dimension (source of state or legal authority), a commercial dimension or a dimension open to a wider audience (source of artistic or journalistic authority, or using a trademark), an organizational dimension (source of managerial authority), a community-centered dimension (source of authority linked to tradition or a cause), etc.

Whatever the informational, infocommunicational or transmedia devices, the individual in charge of editorialization is building the architecture of information, which can be extended, with transmedia devices, to the spatial and temporal architecture of an event or of a process like that of the presential communication sequences it includes. The editor, in the broader sense of editorial documentarization, promotes a knowledge organization that he/she instantiates in different media to both constrain and empower the process of auctorial textualization. From my point of view, the author may also be in charge of a documentarization project, he/she can indeed claim responsibility for somehow

structuring the medium in a more or less free manner, depending on the rigidity of the structure and the access rights awarded to him/her. Here, the complementarity between genre and style described by Clot and Faïta[65] can be applied to professional genres. "Each subject interposes, between him/her and the collective genre that is mobilized, his/her own modifications of the genre. Style can thus be defined as a metamorphosis of the genre during the action."[66]

[65] Clot, Yves, and Daniel Faïta. "Genres et styles en analyse du travail Concepts et méthodes." *Travailler*, vol. 4, 2000, p. 36.
[66] Ibid.