To quote this reference :
Gantier S., Labour M., "User Empowerment and the I-Doc Model User", in Bihanic D. ed. Empowering Users Through Design: Interdisciplinary Studies & Combined Approach for Technological Products and Services, Springer, Cham (Switzerland), p. 281-307, 2015.

CHAPTER 13
User Empowerment and the I-Doc Model User

Samuel Gantier, Michel Labour[144]

Abstract. This chapter examines how designers formally portrayed the "target" user of an interactive documentary (i-doc) within a dynamic team design process. Our initial research postulate was drawn from Umberto Eco's (Eco, 1989) theory of textual cooperation. This enabled us to hypothesize that the inevitable preconceptions of each member of the i-doc design team would lead to a, more or less conscious, creation of a "Model User". A corollary to the hypothesis was that the traits of the Model User would tangibly influence the way in which an i-doc was effectively presented to Internet users. To examine this hypothesis, in terms of its empowering possibilities for Internet users, we conducted a case study analysis of an i-doc, produced by a French public broadcaster, called *B4, fenêtres sur tour* (*B4, Windows of a block of apartments*). We used an ethnographic participant-observation approach that identified three complementary dimensions of the Model User: *exogenous*, *interactional* and *empowering*. These dimensions highlight how the different agendas of the *B4* design team led to the creation of a "composite" Model User that guided the sociotechnical development of the i-doc. The impact of a, more often than not, implicit Model User on design choices puts the spotlight on the empowering role and place of Internet users and how they make sense of an i-doc. The study opens up a number of research and design avenues in how to formally portray and produce empowering user-centered i-doc design.

13.1 Introduction

Since 2008, several hundred "interactive documentaries" (i-docs) have been published on the English- and French-speaking Internet. We define an i-doc in line with Gaudenzi (Gaudenzi, 2013, p. 73), for whom an i-doc is not the mere extension of linear documentary into digital media, but "something else". The digital nature of an i-doc implies modularity, in that it is created by independent

[144] S. Gantier, M. Labour,
University of Valenciennes and Hainaut-Cambresis, Mont Houy Campus, 59313 Valenciennes, Cedex 9, France.
E-mails: samuel.gantier@univ-valenciennes.fr / michel.labour@univ-valenciennes.fr

objects linked to each other where each file is accessible and independent from the others (Manovich, 2001, p. 31). An i-doc also implies that it is "not something fixed once for all, but something that can exist in different, potentially infinite versions" (Manovich, 2001, p. 36). This variability means that an i-doc can change and evolve, allowing collaborative creations that were not possible with film and video. In this context, an i-doc seeks to combine digital media to the long heritage of non-fiction films. With Web 2.0 and the changes of the broadcast industries, connected interactive interactions, such as the non-stabilised i-docs, come with ideological discourses focused on a "New Writings"[145] approach. This rhetoric of newness legitimates a change of creative paradigms concerning the traditional roles of the author and spectator as "users". This includes in examining how an i-doc opens up the possibilities for a user-led "documentary voice" (Nash, 2014)[146].

With the New Writings paradigm, users are afforded a central place with an active, if not empowered, role in the designing of an i-doc. In this light, broadcasters suggest that i-docs be "gamified" as a way of "giving voice (to users) by providing the means, or tools that will induce others to speak for themselves, and the context in which they may be heard" (Daniel, 2012, p. 217; Nash, 2014, p. 3), and even to create their own content. This is what Nash (Nash, 2014, p. 6) calls *voice-as-authorship*.

The overall aim, however, was to engage users actively beyond being passively involved in the i-doc process (see a broadcaster's view on this issue in Table 2.2, below). The implication for the editorial strategy was to facilitate an interactional communication approach by formulating ways of creating solid links with a community of empowered Internet users within social networks[147] (*voice-as-social participation*; Nash, 2014, p. 6).

If the emerging i-doc format appeals to media professionals, the empirical grassroots reality of an active, if not empowered, user raises numerous issues for designers. In effect, the injunctions of upstream deciders to place the user in the

[145] The term "nouvelles écritures" (New Writings) was coined in 2011 by the *Nouvelles Ecritures* department of the French state-funded national television group, *France Télévisions*, to spearhead innovative digital contents. URL, January 27, 2014: <http://nouvelles-ecritures.francetv.fr>

[146] For Nash (Nash, 2014, p. 6) the two-dimensioned concept of a use-generated documentary voice allows the possibility "for audiences to challenge the documentary's point of view". The first concept is *voice-as-authorship*, where users are involved in decisions taken about what the documentary publishes. The second concept is *voice-as-social* participation. This refers to the ability of users to "connect and engage" with each other through the documentary.

[147] One can speak of an interactive documentary ecosystem that regroups public funding in France and Canada for the "New Writings" format via a growing network of festivals and professional training schemes.

center of editorial, artistic and ergonomic consideration comes up against numerous problems in the different phases of the life cycle of an i-doc.

In this chapter, we examine the various ways in which designers, as social actors, formally portray, or "modelize", an i-doc user. In this light, the chapter outlines the research methodology, followed by an overview of the research findings. We then present in detail the three dimensions of the Model user. First, the *Exogenous User* is described in his or her penchant for the heterogeneous way in which the projected user blurs the identity of the overall Model User. Then we explain the characteristics of the *Interactional* User and the issues it brings up in designing an i-doc. Finally, the *Empowering* User is analyzed in its various facets.

13.2 Research Methodology

A grassroots participant-observation approach was used to study the design process of an i-doc from an ethnographic perspective. One of the researchers of this chapter was a film-editor of the design team involved in designing an i-doc for the French national television network. From this angle, each member of the design team was considered as "informers" engaged in complex social practices. The dual role of the researcher as an embedded social actor as a former freelance film-editor and the present role of as a researcher constitutes one of the characteristics of the participant-observation approach with its potential strengths and weaknesses (for further discussion of this point, see the Conclusion, below).

Our research postulate was drawn from the theory of textual cooperation of Umberto Eco (Eco, 1989), notably his well-known concept of the "Model Reader", which we call, here more broadly, "Model User". We thus posited that the design team would, more or less, consciously create a *de facto* "Model User" *via* design strategies as an attempt to guide user's sense-making processes. Thus, one of the objectives of our participant observation was to identify how the Model User was constructed and what the end result was.

Following the sociological Actor-Network Theory (Akkrich et al., 2006), our study retraced the sociotechnical negotiations of the author-filmmaker with the different members of the design team. This involved identifying negotiations *via* innovative technical injunctions between "actants" (symbiotic relations between human and non-human actors of an operational network) that prefigured the Actor-Network Theory inspired "prescribed usage scenarios" (*Utilisateur-Projet*) of Akrich (Akrich, 2006) of the technical framework of an i-doc. In our study, the challenges tackled

by designers were seen as a way to understand how actants could creatively use an i-doc.

In this context, a case study method (Labour, 2014) was put in place to define the conceptual and operational parameters of our study into a real-life i-doc design process "in action". The ensuing field data were analyzed by using the precepts of "grounded theory" (Glaser and Strauss, 1967). In a nutshell, a "grounded theory" approach involves a bottom-up approach to theory creation based on inductively creating conceptual categories taken from empirical data. The more recent works of Paillé and Mucchielli (Paillé and Mucchielli, 2012) was used to establish the protocol for conceptual category building (Table 13.1). Data collection was conducted by cross-matching information taken from technical documentation on i-doc production, email conversations between design team members, semi-guided interviews, team meetings, statistical data, notes taken from observation of team members, and "debriefings" with research colleagues not involved in the *B4* project. The triangulation of these different sources was conducted within the framework of what Elias (Elias, 1993, p. 25-35) calls the two levels of knowledge in a to-and-from dynamic between the "engagement" of the employee-participant in an activity and the critical "distance" of the researcher from the activity observed.

The underlying question that guided our study was to understand, for example, how the preconceptions and the reasoning of the different members of the design team impacted on the different pathways proposed for the designing of the i-doc. This led to questions about how expected media use by future Internet users was formally portrayed in the i-doc design? What did the upstream members of the design team of the i-doc put in place to facilitate the active participation of its projected Internet users? How did the final i-doc design formally portray "participative interactivity" with Internet users? What were the different action modes made available to the user wanting to make sense of an i-doc.

13.3 Overview of the Findings

Our analysis is based on a published French i-doc, called *B4, fenêtres sur tour* (*B4, Windows of a block of apartments*)[148]. This i-doc is a literary adaptation inspired from George Perec's prize-winning "novel", *La vie mode d'emploi* (Perec, 1980). The i-doc is composed of 96 video interactive modules placed in a graphical

[148] The *B4* i-doc was directed by Jean-François Ribot and co-produced by *France Télévisions* and *Mosaique films* in June 2012. URL, January 27, 2014: <http://www.francetv.fr/nouvelles-ecritures/banlieue-b4>

interface portraying a 12-storey, inner-city block of apartments. The different video sequences lasts between one to three minutes. They show in a fragmented and singular manner the way in which a dozen inhabitants of this type of mass-habitation appropriate their everyday living space.

The research findings brought to the fore three complementary sub-dimensions of the Model User. These are the *exogenous*, *interactional* and *empowering* dimensions. The Table 13.1 summarizes the findings based on an analysis of the data using a grounded theory approach. The category building approach of Paillé and Mucchielli (Paillé and Mucchielli, 2012) was used to create the "conceptualized categories" of Table 13.1.

Table 13.1 Tridimensionality of the Model User

Conceptualized categories	Definition	User dimensions
Portrayals of the i-doc format	A set of sociotechnical dimensions that pre-constructs an i-doc format (spectator of non-fiction films, Web 2.0 Internet users, reader of youth literature, etc.)	*Exogenous User* — borrows and hybridizers from pre-existing genres.
Negotiation of interfacial interaction modalities	Debate between "guided" navigation and "intuitive" navigation.	*Interactional User* — seen by designers as having a certain level of media literacy.
Negotiation of participative modalities	Debate between "open" works and "closes" works.	*Empowering User* — able to feels empowered to act on an i-doc.

13.4 The *Exogenous* Dimension of the Model User

In this we examine the facets of the *exogenous* dimension for the deciders of the design team (filmmakers, producers, web developers, graphic artists, television broadcasters, *etc.*) having to cope with a wide diversity of i-doc designs. This diversity can be explained by the still emerging editorial formats of i-docs that bring together designers from different professional perspectives, for example, about "what the user can do and wants to do". These different perspectives can lead to a clash of design methodologies and a weakened workflow process.

13.4.1 The Heterogenous Portrayals of an I-Doc Format

We argue that different professional modes of operation, norms and values condition the aesthetic and ergonomic framework of an Interactive Documentary. Following the work of the Symbolic Interactionism movement, we assumed that the human actors[149] of the i-doc design team were members of different "social worlds"[150]. The notion of social world is a particularly useful heuristic to "analyse conflicts and negotiations in the construction of technical artefacts" (Flichy, 2003, p. 119), notably, in terms of the professional, aesthetic and technical culture of each member of the design team that conditions expectations and implicit preconceptions about the hybrid and non-stabilised i-doc format. This means that the identification of the specificities of an i-doc can differ radically depending on the designers' professional culture and mode of operation. The final i-doc invariably ends up as a negotiation between the implicit logic of the televisual documentary industry and the demands of putting online a hypermedia artefact. It is in this context that Web 2.0 broadcasters, with a purported "innovative editorial" logic[151], can associate an i-doc to a strong discourse on user participation. An i-doc thus can become a place of empowerment[152] in its enablement logic (see below) for designers in allowing them greater artistic freedom compared to the pre-established formats of television channels for authors-filmmakers and to the monetization logic of web sites for developers. We thus advance the hypothesis that i-docs, in the domain of transmedia production[153], are the result of a complex relation based on a series of pre-existing *exogenous* (external) references (film documentary, journalism, video-games, contemporary art, broadcast culture, Web 2.0 ideology, youth literature, etc.). If this hypothesis holds, it would then seem reasonable to assume that in the case of the designing of the i-doc *B4, fenêtres sur tour* (*B4, Windows of a block of apartments*), the "social worlds" of its different members of the design team brought in a series of pre-conceived expectations and implicit preconceptions about the nature of the future hypermedia artefact. Tables 13.1-2 present key aspects of *B4* designers' social worlds regarding i-doc formats.

---

[149] See Actor-Network Theory, in section "Research Methodology", above.

[150] The notion of "social worlds" refers to group activities that have no clear boundaries, nor a stable formal "organisation". It is in this sense that the notion of social world differs from a classical concept of "organisation" having various internal social worlds. In our case, however, a social world is a phenomenon that can be common to different organisations. This implies that various loosely defined social worlds — common to different well-defined organisation — can rival each other, for example, in defining a professional mode of operation or a problem to resolve (Flichy, 2003, p. 118).

[151] We discuss the point in section "The Shared Unity of Choice", below.

[152] See section "The Heterogeneous Portrayals of an i-doc format", below.

[153] See section "The Rival Editorial Models", below.

Table 13.2a Portrayal of i-doc formats by the *B4* design team (continued)

Design team	Portrayals of i-doc formats	*Verbatim*
Author-filmmaker	An empowering space of editorial and artistic freedom for an author to express a personal point of view in a non-linear narrative.	"A cinematographic adaptation of the novel *La vie mode d'emploi* would be too repetitive. The succession of about 20 portraits, from seven different angles, even if it were inventive, would quickly become tiresome."
Graphic designer	A sober and decorative graphic framework to facilitate film content.	"One must not forget the main thing about the web documentary is that they are films to be seen. Behind the (graphic) scenery there is a technical framework. The aim of the game, for me, is to highlight as best I can the films that will be in the framework."
Developer	A cultural web site without the limits of monetizing web traffic.	"In the case of *B4*, I like the idea of publishing content; with the site being just an access tool to these videos and not a window to generate traffic and money."

The key point of the *Model User* is its ability to sustain a certain undetermined aspects of the innovation process. It is this element that qualifies an i-doc as a polysemic catch-all term. This type of all-embracing term participates in the hybridization of professional concepts and skills in the renewal of the non-fiction cinematographic process with the rise of computerized media. It is at this precise point that the portmanteau-word "empowerment" comes to the fore.

Table 13.2b Portrayal of i-doc formats by the *B4* design team

Design team	Portrayals of i-doc formats	*Verbatim*
Video technician	A web program that adapts to feedback from the Internet users.	"The interactive documentary is an open scenario that can become a subject for discussion forums as a way to add on modules more or less on line with what the Internet users want."
Producer	A transmedia production that articulates the author's documented viewpoint in a participative to the Web 2.0 dimension.	"While the unusual, the violence and the futile are found side to side on the Net, we wish, on our part, to put the incredible possibilities of this new mode of creation to the benefit a documentary approach."
Broadcaster	A formal and technical experiment to strongly engage an audience *via* a participative dimension.	"The radical break of the digital universe is audience engagement where the public, the citizens now have a preponderant place. The creative view point implies integrating their commentaries and especially involving them at different content levels including offering them the possibility of participating and, even, creating content."

Working between different technical, design and editorial boundaries, calls for discretionary choices based on the designer's creative "imaginary" skills. The challenge of this boundary shifting for the i-doc design team includes finding a way to encourage a user's empowering process. Such an empowerment enables users to voice a personal viewpoint in novel, or counter-current, actions regarding a shared problem situation. Empowerment entails individuals authorizing themselves to author discursive practices that nurtures the "*freedom to have one's voice heard, (the) freedom to develop a voice worth hearing.*" (Hymes, 1996, p. 64) Empowerment is thus affirmatively communicational. It enables an individual to affirm an apparently personal repertoire of exchanges and topics in terms of social positions and gatekeepers, involved in the distribution of discursive resources and practices, within a "communicational situation" (Mucchielli, 2006). At first glance, this definition of user empowerment is closely associated to what Nash (Nash, 2014, p. 6) names "voice-as-social participation" highlighting the ability of users "to connect and engage with others" in active participation *through* a media. That having been said, our view of empowerment also includes "voice as authorship" relating to users ability to contribute to the documentary text as participation *within* a media (Nash, 2014, p. 5).

The term "apparently personal" is used as we posit that individuals are not isolated beings, but cultural co-participants of an ongoing reconstruction of the social fabric (whether individuals are aware, or not, of the socio-cultural dimension of their "personal" choices is beyond the ambit of our study). What our study does clarify, however, is how the phenomenon of "empowerment", as a form of social, personal and technical enablement, can be, in part, explained by what we dub the *Exogenous User*.

Our findings identified, within the *Model User* dimension, a user that typically borrows from pre-existing genres when exchanging with other members of the design team who have their own implicit and non-stated design formats (these designers, as actors of their respective social worlds, tend to consider their implicit preconceptions as "natural" or "common sense" knowledge needed to avoid the cognitive burden of reinventing everything at every moment). The *Exogenous User* is thus often heavily involved in designers' discourse and operation modes, notably in the way they participate in the design process, without being made aware of how they effectively operate during the life cycle of the project. As implicit knowledge, gained over the years, these preconceptions can be either a professional asset or liability when engaged in an innovative process that goes beyond "common sense" as received wisdom. This is where the enabling empowerment process steps in. The *Exogenous User* needs to be enabled to take the (calculated) risk of borrowing (relatively) unknown phenomenon from pre-existing genres, gleamed from other members of the design team, in order create a novel hybrid solution to a given problem situation. This "inter-disciplinary" approach carries with it the danger of misinterpreting or over-diluting what was borrowed from other genres.

13.4.2 The Blurred Identity of the Model User

There is little evidence to indicate to what extent and for how long a user will take to engage with an i-doc. Indeed, in 2012, the New Writings department of *France Télévisions* was not able to provide a projection of audience figure before going online. This created problems when putting in place the technical and communicational framework of *B4* given that the *B4* designers wanted to appeal to the largest possible audience as is done in the long tradition of non-fiction films. In addition, the designers were well aware that the web site navigation of the i-doc needed a certain amount of media literacy often associated with an "expert" user of the Internet. From an editorial perspective, this meant that the i-doc was to be aimed at Internet-experiences users residing or interested in the social issues of inner-cities.

> "*We have a lack of feedback. We do not know what to expect from the public, or how many people want to participate. If I had to host the web site, it would very difficult to work out what size of server I needed. Are we going to have 6 000 people, or only two who will click on the same space at the same time?*"
>
> ~ Interview with a *B4* developer (Gantier, 2014)

In this context, the experimental nature of an i-doc production is often used to justify the incertitude concerning the likely response of real-life user. It is therefore not surprising that few authors appear to have anticipated if the user will take to, for example, the gaming aspects of the navigation design.

Following Akrich (Akrich, 2006), we argue that, typically, the designer has three basic choices in the portrayal of his or her Model User. First, the designer can base his or her choice essentially on *personal experiences,* drawn from the received wisdom of cultural "common sense". Secondly, the designer can focus on an *ad hoc* sample of user "*representatives*" taken from his or her private social circle. Thirdly, the designer can focus on a *formalised user* constructed from an empirical study *in situ* (e.g. ethnographic analysis, usability tests, ergonomic principles, *etc.*).

One key element of our findings is the identification of how the members of the design team use their personal experiences in a, more or less conscious, portrayal of the Model User. Another element of the findings showed how the design team regularly spoke about how users could make sense[154] of the i-doc using the grammatically impersonal third person of the plural form, as in: "*The people* will go to the *B4* screen, *they*'ll start to watch the videos, *they*'ll click here, then *they*'ll, (…)". This type of discourse contributed to a projected vision of users portrayed as an amorphous, self-contradictory phenomenon without a clear identity. This vagueness about the future user opened up a space for the "imaginary" skills of designers, which in this case, were essentially focused on their own mode of operation and the demands of a computerized network media of the i-doc in the making. In other words, each member of the design team sought to legitimate his or her "naturalized" (taken for granted) vision of the future i-doc and its empowering possibilities through the artistic and editorial freedom the format affords.

---

[154] The term refers to a problem-solving sense-making process (ex. "What is going on in this i-doc?") that consists of connecting personally significant meaningful informational constructs into a coherent, integral whole (cf. Labour, 2014). This view of sense-making is in line with what Hymes (Hymes, 1996, p. 9) described as the human process of "*making sense out of disparate experiences using reason to maintain a sphere of integrity in an immediate world.*"

This quasi-phenomenological approach to understanding discourse about the workflow process within a design team can be found in the account given by a film broadcaster who spoke of him starting from his own daily experience as an Internet user when he tries to understand habitual use of others on the Web: "Ask yourself what you do on the Web? Why do you click, or not, on a Facebook link sent by a friend? What type of link makes you react? " Given the impossibility of predicting the response of a typical Model User, the developer needs to take on board all the possible options when designing the web site. In an interview with a *B4* developer, the person stated how some Internet users would probably directly look for key words in the text, others would prefer images. "*In the case of B4, we raised the problem that some Internet users won't find it very easy to click on windows. So we included a display of themes and titles that are familiar to Internet users.*" (Gantier, 2014) In another interview, the graphic designer referred to the idea of a "basic Internet user" when describing how most Internet users had limited Web-media literacy skills (Gantier, 2014). A more hardline approach was taken by the i-doc producer who rejected heavy directive interactivity as a way to keep Internet users glued to the screen: "On the Web, as soon as you want to take me by the hand, I get turned off! I'm not interested in being told 'You are such and such a person, so login to live an incredible experience'." (Gantier, 2014)

In short, the findings show a blurring between the innovative nature (clicking on windows) and the "common sense" banality (clicking on a familiar display of themes and titles) of the site. This blurred definition of the Model User reveals a paradox about the nature of the designers' vision of the "typical" Internet user.

> "*The person who is interested in i-docs today, is someone who uses the Internet every day when looking for information. It is not my mother who will only go on the Internet to see if I have sent an email, or to buy train tickets online. Plus, we are banking on the fact that there is no bandwidth problem, nor of users misunderstanding what we have done.*"
>
> ~ Interview with a *B4* graphic designer (Gantier, 2014)

In conclusion, the *exogenous* dimension of the Model User depends on the designer's professional culture, on the one hand, and the mode of practice of the design team, on the other hand. The differences between the members of the team can lead to very different criteria about the defining features of the i-doc. This can lead to blurring, if not a confusion, about the operational identity of the Model User, notably about what can be expected of the person in terms of acquitted media literacy skill.

13.5 The *Interactional* Dimension of the Model User

The *interfacial* sub-dimension of the Model User encapsulates the ways in which a user would make sense of the interactional design of an emerging i-doc. This dimension questions the different professional pathways and preoccupations of the members of the design team. It seeks to pinpoint how designers' preconceptions about the media literacy level of the "average" Internet user can formally be presented in an i-doc design.

13.5.1 The Issue in Design Interaction

I-doc "interaction design"[155] defines scenarios of actions that facilitate users' sense-making process. To do this, "suggestions" from the designers were communicated to users *via* an intermediary technical artefact. To do this, the artefact affords "handles" to tangibly frame user interactional experience (Bouchardon, 2009). Concerning the *B4* i-doc, three modes of navigation co-exist in order to view the 96 videos. First, there is a *horizontal* navigation focused on the characters. Second, the user has access to the videos by a *vertical* navigation highlighting different film styles. Finally, the user can choose a *transversal* navigation to choose the videos grouped according to various themes (Figure 13.1).

We call *Interactional User* that dimension of the Model User concerned with the interaction modes with the i-doc. The interaction consists of a dialectic between the logic of user's freedom of choice and that of the more coercive navigation paths of the i-doc. These challenges of these two logics manifest themselves during the design of the film interface when design team members negotiate which functions and which semiotic signs should be displayed on-screen when integrating, for example, a video player, an instrumental function, or a "paratext"[156]. Without going into the technical details, it seems useful to examine the different approaches that arise in the negotiation between the *B4* design team members.

---

[155] Bill Moggridge and Bill Verplank coined the term "interaction design" in 1986 to underline "user experience" rather than just focusing on artefacts and the "design of user interface" of computer engineers. This approach emphasizes users' needs, desires and pleasure.

[156] According to Dupuy (Dupuy, 2008, p. 23-24) the web-based "paratext" allows a user to categorize the text into its genre, and to organize the different elements of the (main) "text".

Fig. 13.1 Screen capture of the homepage of *B4 Windows of a block of apartment*

An interview with the *filmmaker* and *graphic designer* duo put forward arguments for an "open" *laissez-faire* navigation mode based on an intuitive and spontaneous navigation logic (Gantier, 2014). They argued that one should avoid, as much as possible, adding in "paratexts" to influence users' navigation. It is up to the user to infer the navigation logic according to "clues" embedded in the graphic interface. This design approach can be descried as a type of "hermeneutic" navigation in that the user proceeds in a trial and error way. The *B4 developer and producer* duo had a more nuanced approach and wanted "semi-guided" navigation. Their aim was to minimally guide the user's sense-making process (Labour, 2014) by offering different types of navigation (content indexation in the video reader, suggestion of continuing the sense-making process in different domains after the user had watched the videos module, etc.) A more hard-lined approach was taken by the *broadcaster* who advocated a guided navigation that adhered to current Web usage norms and that was adapted to the media literacy skills of a "typical" Internet user of today. The table, below, summarizes the different points de view of the *B4* design team on the navigation question.

Table 13.3 Issue in the interaction design of B4

Design team	Prescribed navigation	Communicational logic	*Verbatim*
Author, Filmmaker, Graphic Designer	Intuitive navigation, trial and error logic.	Gaming dimension to discovering how the web site functions, not necessary to view all the videos.	"The initial idea is that we had to understand very rapidly the vertical and horizontal navigation principle. The formal principle (horizontal and vertical) must create positive user expectations. So when the Internet users clicks, she must quickly understand the navigation principle. This means you don't have to inform her about what it means to go left, right, top or bottom."
Developer	Semi-guided navigation with guidelines.	Information is organized without informing the user how to navigate.	"I come from a Web development institution, so the aim for me is, above all, not to lose Internet users by making sure everything is immediately identifiable. The difficulty for me is to grasp what the filmmaker wants, given that he did not want to start from scratch by saying to me 'here's the map of the web site, now get on with the job'!"
Producer	Semi-guided with guidelines	Graphic design guidelines in the video reader	"One must guide the Internet user by giving him either a horizontal, or a vertical navigation? On this point, I was practically the only one, and against them all, at the start (…) as I put myself in the place of the Internet user who viewed the first film by chance: 'What will incite him to look at a second film? Up to what point will the person freely and willingly engage himself?"
Broadcaster	Guided Navigation	Conform to the norms of current usage	"The 'clickism" is codified. One must totally guide the Internet user and not be totally enigmatic."

In short, the *interactional* dimension of the Model User looks at the different ways in which a user could make sense of the interactional design of the i-doc. This leads to asking questions such as what were the different pathways proposed by the different members of the design team. How are user's media literary skills formally portrayed in the i-doc design in a way that it can facilitate giving both voice as authorship (with the design team) and voice as participation (with other users) (Nash, 2014, p. 6).

13.6 The Empowering Dimension of the Model User

The *interactional* dimension affords a central place and role to the Model User. In such a case, how does the i-doc design formally portray our concept of "participative interactivity"? What were the different action modes made available to the future Internet user wanting to interact with the i-doc *i.e.* voice-as-authorship (Nash, 2014, p. 5). What can the design team of the i-doc put in place to facilitate empowering participation of Internet users?

13.6.1 The "Contributive Interactivity" Mode

The participative nature of an i-doc is based on a particular idea of what constitutes an "innovative" editorial format. The department of New Writings of *France Télévisions* heavily promoted an innovative editorial approach that encourages user intervention through a network of empowering interactive artefacts. The objective is to empower Internet users by encouraging them to introduce their own data onto the film interface and in so doing, the i-doc goes beyond just giving users access to existing author-filmmaker content.

In this light, the aim of *B4* designers was to empower its Model Reader as a "reader-writer". To do this, the Internet user was allowed to send *tweets* that were immediately displayed on the stairwell wall of the block of apartments portrayed on-screen. In this way the flow of real time information of the social network tool *Tweeter* was directly displayed on the i-doc web site for all to see and comment. The technical framework of *B4* enabled Internet users to read and reply to messages of fellow Internet users who had put *tweets* on the wall. Internet users' *tweets* attempted to semiotically mime the writings on the wall, akin to graffiti that embellish the urban décor of certain inner cities. The introduction of new data from Internet users effectively modifies the editorial content and the aesthetic form of the i-doc. From this angle, the i-doc is both a machine (superstructure) and a mechanism (infrastructure) "*in the sense that it provides different handles for a public that can now, within certain limits, also become actors of a partially pre-fabricated i-doc.*" (Fourmentraux, 2010, p. 39-40)

This mode of bottom-up user contribution was designed to give Internet users a place to freely voice their opinions within the diagesis (interior view of the fictional world) of an i-doc interface. We describe these series of *tweets* as "contributive interactivity" that nurtures user participation empowerment as can be found in the interactivity modes of *Net Art* (Fourmentraux, 2010, p. 39). If this interactive

contribution function encapsulated the wish to empower the Model User, its application posed a number of questions. Up to what point can one empower any and every Internet user to write what he or she wants on the interface of an i-doc? In response to this question, the design team agreed to create an editorial filter between real time *tweets* of users and its immediate display on the *B4* web site. This was to be done by asking a community manager to mediate (filter) between what would be displayed on the *B4* and what Internet users would send. From a production perspective, it was also necessary to develop an automatic management protocol to cope with users' *tweets*. These two suggestions were not put in place due to a lack of human and material resources.

Besides the financial costs, the contributive interactivity mode had aesthetic consequences. The semiotic challenge was to transform users' authorship voices, as expressed *via* a *Tweeter* thread, into an appropriate artistic typographical, lay-out form that could be assimilated into the graphics of the website.

13.6.2 The Mediated Circulation of Facebook

The widespread nature of Facebook and its social implications has been largely discussed in the literature. We will therefore not discuss the circulation and the monetization of personal data based on neither users' profile, nor the sociotechnical features of Facebook in portraying personal space. Instead, we examine the possibility of putting user comments of *B4* on Facebook and the discursive intertextuality between Facebook and *B4*. The aim on including Facebook was to empower users' "voice-as-social participation" through electronic media (Nash, 2014, p. 6). This begs the following question: What were the design implications for organizing mediated interactions *via* a social network like Facebook?

A strong impetus for including a contributive interactivity function within *B4* came from its broadcaster who repeatedly requested that the i-doc contains such a feature in spite of the fact the author-filmmaker felt that users' "taggings on the walls" demeaned the aesthetic quality of his work. For the author-filmmaker, Facebook appeared to be a better place to present user reactions to the videos. The i-doc should therefore remain a closed author-filmmaker generated place, while Facebook could be a place for user exchanges and community building. Given this, the auctorial work of the *B4* consisted of defining an intermediary mediation framework to frame users' participation modes between *B4* and Facebook.

When wanting to include a tool like Facebook in the design process, however, it assumes that the Model User is an informed Internet user who communicates regularly on electronic social networks. It implies that prior to consulting *B4*, Internet users have a Facebook account and are familiar with the action of "like" as a way to share their tastes to a community. In point of fact, the design issue concerning contributive interactivity goes beyond Facebook. Whether, or not, the contributive interactivity of *B4* is externalized to Facebook, it does not fundamentally alter the design issue of what to do with what users communicate as a way to empower Internet users.

It turned out that the negotiations between the design team members were effectively focalized on the discursive nature of user comments and the value judgments they could contain (user approval, thanks, encouragement, questionings, criticisms, insults, etc.). The *B4* design team sharply criticized the electronic ("virtual") social networks that tend not to participate in social and political debates raised by documentary films. These networks went against the aim of the author-filmmaker of encouraging public debate through his videos.

The counter-argument to the author-filmmaker was that the dialogue dimension of the contributive interactivity mode should be associated with the principle of "virality", a typical feature of electronic networks. This form of communication could also be linked to a marketing strategy that uses electronic social networks to attract Internet users to a web site. Such a strategy goes beyond merely creating socialization links into a community. It also aims at creating a large audience of "people that you can contact and who will 'advertise' whatever you want" (Georges, 2009, p. 8). From this perspective, an i-doc that converges with a social network, finds itself sharing a similar communicational logic as the service industry (restaurants, tourists sites, businesses) where consumers are encouraged to comment on the quality of the service rendered as a way of creating "loyal" and regular customers. This is paradoxical given that many documentary filmmakers claim not to have a profit-making agenda in mind, nor wanting to create "loyal customers". There is consensus, however, about the need for users to identify, and make sense, a distinguishing quality in what they were asked to see and hear. One of the challenges of the graphic designer is thus to create a link between giving a clear visual distinguishing identity to an artefact and the practical necessity of respecting semiotico-cultural ("common sense") conventions of a given public.

In this case, the challenge was to create a clear link between the *B4* Facebook page and the *B4* i-doc. The design solution opted for affording Internet users a choice of "go-between" signs (*signes passeurs*, in French; Souchier and Jeanneret, 2002) when wanting to recommend the *B4* i-doc to a social network "friend". Indeed, Facebook

appears to have a number of potent go-between signs based on a convincing semiotic logic, *i.e.* a meaningful sign linked to a recognized (and often implicit) social convention. For example, the apparently successful thumbs-up Facebook "like" icon appears to be based on an ancestral cultural symbol going back to gladiatorial combats of ancient Rome (Corbeil, 2004; Faucher, 2013). The icon directs the user to his or her personal Facebook screen-page.

> "*Its small size rests on a complex technical writing technique that allows precise user gestures to produce important sense-making effects and economic returns by mobilizing a significant amount of people who click.*"
>
> ~ Candel, Gomez-Mejia, 2013

Another well-known "go-between sign" to Internet users is the grey, encircled Facebook letter "F" (relooked by a *B4* graphic designer), on the top right-hand side of the *B4* screen (Figure 13.1), above. The sign was aimed at guiding the Internet user to the *B4* Facebook screen-page administered by the production team. Internet users can thus go to the Facebook *B4* space in order to become part of the greater *B4* "community" and/or update news thread on their personal Facebook "wall".

The link, however, between the *B4* Facebook screen-pages (personal space page and *B4* page) creates a breach between "watertight" levels of the Facebook system. There is no direct exchange between screen-pages. It is up to the Internet user to move from one page to another. It also needs be said that it is an appointed administrator who posts information on the *B4* Facebook page. Users can annotate or comment, but not post information directly on the *B4* Facebook. Seen from this perspective, the Facebook system does not satisfy the aims of *B4* to empower users by encouraging them to freely voice issues of what is important to them in terms of the *B4* videos.

13.6.3 The Shares Unity of Choice

The issue of contributive interactivity becomes particularly complicated when the question is asked at what level, users can share the i-doc content with other online users. To answer the question one needs to define the minimal semantic unity of what should be disseminated on the network. Three basic options were possible. The first option involves sharing the i-doc as an integrative whole. The *B4* experience is then lived in its total globalness. The second option concerns the dissemination of the 96 videos as independent, stand-alone units. The *B4* experience is thus presented in a *modular* form. The third option offers the

possibility of commenting on fellow users opinions of the *B4* videos. The idea, here, was that Internet users could be interested in what fellow users had to say about B4 content as much as, if not more so than, the original content itself. This may be particularly true for fans who visit the *B4* site wanting to see what other people felt about the issues raised by the videos. The *B4* experience of facilitating this type of user dialogue was aimed at encouraging the empowerment process through an online *agora* type of "community" building.

A *unitary* and *integrative* logic (Option 1) contrasts to a fragmentary and *modular* logic (Option 2). A modular logic is defined by an ontological network of elements that allows the user to have access to information in a fragmented way through metadata that describes the content in HTML tags. The challenge, here, is to reference deep links of the web site in order to improve its identification on the Web, notably when users conduct online searchers. This approach differs to a unitary logic (Option 1) that sees an i-doc as a totality of complex undissociable elements. This involves viewing the videos in the foreground while keeping in the background an overall a *Gestalt* visual mood of the inner-city residential environment. The hypothesis of designers was that viewing the same video with the *B4* background will not have the same empowering effect as viewing the video, for example, on a more "impersonal" YouTube or Facebook context.

If links are primordial in a sharing logic, the i-doc then becomes the central element of a reticular system. In what manner were data and information constructs then disseminated? What mediation mode could be introduced so that a Facebook-type function becomes "naturalized", *i.e.* "invisible" to the Internet user? In response to these questions, we hypothesize that a potentially tension exists between a *centrifugal* and *centripetal* logic within a larger reticular navigation system. A centripetal logic draws Internet users to the *B4* site *via* the intermediary shared link, for example of a Facebook "friend". Yet, paradoxically, when the Internet user clicks on the *B4* "like" icon, the interface creates a centrifugal logic that propulses the Internet user towards his or her own Facebook personal wall (and not to other *B4* users). There is a risk, here, that such external links lose Internet users even before they finish viewing the videos. The sharing function could thus have the counter-productive effect of getting newly arrived users to the *B4* web site to immediately go onto Facebook without viewing any videos. Instead of Facebook bringing users to the *B4* i-doc it could take people away from watching the videos in a *B4* environment.

13.6.4 The Offline Mediation

In order to produce an editorially high quality publication, the *B4* producer sought to organize an amateur photographic competition on the theme of inner-cities[157] (Figure 13.2). This was done according to the precepts of transmedia logic of developing offline events parallel to online events in B4. The objective was to create a special symbolic "virtual museum" in which Internet users expose photographs linked to the film universe. The museum could be updated in real time so that users can see their photographic works of life in inner-cities. This action created a dialectic tension between the wish to encourage free and creative expression, on the one hand, and the (legal, moral) need to have an editorial control on what content is published on the *B4* site. How can one then organize the contributions of Internet users without deforming the artistic quality of B4? Once again the issue of human (manual) and/or machine (automatic) filtering of Internet users' contributions is raised. The thorny editorial question is poised between having limited selected content of "recognized quality", on the one hand, and encouraging a maximum amount of mass participation without distinguishing "low" or "high" quality user input, on the other hand. This creates a dual paradox. The selecting of users' comments may disempower those whose comments were rejected, but in doing so help empower the lucky few who publish online. Likewise, putting a maximum of comments online may discourage "high quality" seeking users, not wanting to sift through what they may deem as "low quality" comments, but in doing so the mass publication policy could empower other users as socially recognized readers-writers regardless of the apparent quality of their texts.

In spite of claims from some, that "Web 2.0" ushers in the Golden Age of the reader-writer, time has shown that the editorial creation of quality content remains socially selective. For Rouquette (Rouquette, 2009, p. 55) it is not enough for Internet users be intellectually and technically able to create usable and popular content on the Internet, they need, above all, to be part of a certain "macro-social environment". Such an environment allows marginal pioneering practices to be transformed into everyday habits and to become taken for granted cultural practices. The interactional dimension of the Model User is thus situated at the confluence of the actions of "enlightened" amateur and the demands of new documentary writing techniques.

[157] The photographic competition was organized with partner institutions (e.g. *Academie-des-banlieue*), social organizations (e.g. *La fonderie*) and the media (e.g. *Respectmag*, *20 minutes*).

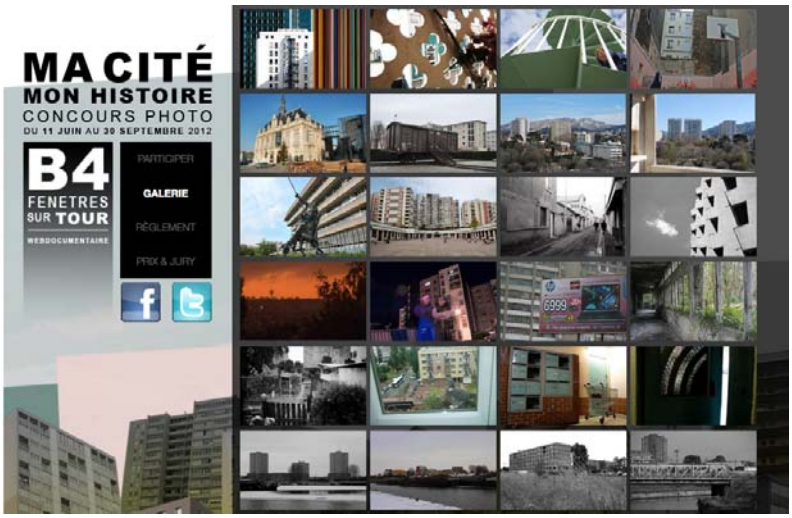

Fig. 13.2-3 Screen capture of the amateur photographic competition

To summarize, the *interactional* dimension affords a central place and role to the Model User in the way the i-doc design formally portrays participative interactivity based on a view on how to empower Internet users. This approach leads to asking questions such as what were the different modes of action made available to the user wanting to make sense of an i-doc? What did the upstream members of the design team of an i-doc put in place to facilitate the active participation of Internet users?

13.6.5 The Rival Editorial Models

The expression "to put online" means, in computer terms, being connected to a network of computers or other devices[158]; the term thus implies a network computers and, more often than not, people behind the machines. In this sense, a transmedia production attempts to combine a linear television documentary with an interactive content for the Web and/or offline cultural events. This type of cultural production drives its organizers to think about how it will present its message to the public *via* a "media plan". This invariably leads to establishing a timeline of when and how to disseminate its message. The challenge for the producer is to create bridges between the different media in order to attain different audiences. If in a very competitive context, each media functions

[158] See, URL, January 27, 2014: <http://whatis.techtarget.com/search/query?q=online>

according to its own personal logic, the utopic idea of a transmedia action remains a mirage of wanting to federate different rivals around a common media framework.

Regarding the *B4* i-doc, there were intense negotiations with the broadcaster about when go on online. On one level, there were legal, logistic and organizational question to be resolved. On another level, questions about when to go online revealed a hidden and symptomatic dimension of the Model User. When one deals with such questions, one is effectively defining the way in which the i-doc will meet its public. Behind the negotiations are the issues of when an i-doc will be watched, how often and, more generally, the mode of "consumption". Will the Model User watch the i-doc once or several times? Must one renew the film-interface in order not to tire regular users with the same screen page? Will the Model User alternate between virtual reality of the Web and face to face social practice offline? These questions show the incertitude around creative digital works that seek more and more to attract Internet users.

These questions also explain the need for establishing communication strategies around media-event scenarios either to create expectations and/or to frustrate future Internet users. This invariably means that one seeks to attain a target audience or to maintain the link with a particularly volatile online audience. In some ways, these communication strategies can be compared to organizing a television program schedule so to coincide with events in the everyday life of the user.

Based on grassroots observation, i-doc film editors have observed that the life cycle of an i-doc is particularly short. Once the connection peak has been attained, often during the first few days of the launch, the visitor curve drops dramatically to become practically non-existent. How then can one extend the life of an i-doc after being put online?

One solution is to create active and updated editorial presence on the i-doc web site as a way to ensure a "loyal" audience over a longish period. For the moment, this strategy has still to prove its worth. Other alternatives of involving Internet users were also being experimented. A first scenario was that of creating a series of regular events to meet up with Internet users. A second scenario aims at synchronizing a whole program of online events with a key element in the news. A third scenario seeks to spread the content of the video over two scheduled seasons. A fourth scenario focuses on editorially updating the web site of the i-doc and coordinating it with offline events. The table, below, summarizes these different scenarios.

Table 13.4 Scenarios to extend the life the *B4* i-doc

Schedule for putting online	Site content	Media events	Offline events	Editorial models
Scenario 1	15 characters (120 video modules)	Weekly (May and June 2012)	None	Series of regular events
Scenario 2	15 characters (120 video modules)	Put all online at the same time (April 2012)	French presidential election	Totality of the videos
Scenario 3	10 characters (80 video modules) + 5 characters (40 video modules)	Every two months (April and September 2012)	Coordinated with the photographic competition	Successive versions of the program
Scenario 4	12 characters (96 video modules)	All put online at the same time (April 2012)	Announcing the results of the photographic competition	Whole program

13.7 Conclusion

Our case study brought to the fore three complementary dimensions to the *B4* Model User, which we named *exogenous*, *interactional* and *empowering* The *exogenous* dimension is characterized by a wide diversity of i-doc formats that appeal to, or repel, those (filmmakers, producers, web developers, graphic artists, television broadcasters, *etc.*) involved in a documentary design process. This dimension takes cognizance of the reality that each member of the design team comes with his or her own agenda about who the user is and what he or she wants. Depending on the designers' professional culture, and the design team's mode of practice, the defining qualities of one i-doc from another can thus strongly differ.

The different professional agenda within a design team can result in a clash of design methodologies, resulting in an inconsistent workflow process. It is in this context that the *exogenous* dimension of the Model user underlines the challenge of clearly establishing the identity and the media literacy skills expected of an i-doc Model User. In doing this, it places the issue of how to identify the place and the role of the projected Model User at the heart of designing user friendly navigation

paths (*interactional* dimension of the Model User) in order to encourage empowering user participation (*empowering* dimension of the Model User).

The embedment of the three dimensions of the *B4* Model User is complex. The complexity highlights the challenge of connecting up different levels of the design process in pursuance of an efficient and effective user-centered design. This connection is no mean feat. Amongst other things, it necessitates establishing a clearly shared vision of the Model User within the design team that can be adjusted to the workflow process and the changing environment. One such vision is that of Gaudenzi's interactional and systematic approach to designing for a "living documentary", *i.e.*, a relational object that comes to life when interacting with users (Gaudenzi, 2013).

For Gaudenzi (Gaudenzi, 2013, p. 73-81) i-docs, as relational objects, represent "artefacts that link technologies and subjects and that create themselves through such interaction". This is based on the hypothesis that a relational artefact, in its core essence, cannot be understood "as a finite form but needs to be addressed through the complex series of relations that form it and that it forms" (Gaudenzi, 2013, p. 73-81). This implies that the Internet user moves from externally controlling the artefact to playing a more integral role within the i-doc universe. At the present moment, the idea of a "living documentary" (Gaudenzi, 2013) is more an ideal to strive for than a roadmap for designers. If such a systematic and analytic vision of the i-doc is appealing, our approach, however, seeks to take a critical distance from an overly theoretical approach to user empowerment *via* mediated interaction design.

The methodological rigor put in place in the case study of *B4*, such as the cross-matching of data sources, does not exclude recognizing its limits. One limit of our findings is the very fact of having examined in depth an *in vivo* situation in a given time and place. What would be useful is the examination of comparable situations through other case studies, and/or by establishing a mass questionnaire based on our findings. These measures could contribute to generalizing key elements of our study. A second limit of our study is its participant-observation research approach. It may well be that the position as a freelance film editor, or even the personality, of the researcher, may have produced an overly distorted portrayal of the team design process. It would thus seem useful that other participant-observation approaches be conducted from other positions, such as that of the graphic designer, the film maker, the community manager, etc. A third limit of our approach is that we did not share our findings with the *B4* research team. This may have helped to consolidate our interpretation of our data. This was not done for essentially logistic

reasons (lack of accessibility to the design team members after the publication of *B4*, lack of time and resources).

Given these limits and in looking into the near future, a clearer knowledge of the apparent antinomies and paradoxes of a designated Model User would help designers formally portray their Model User. In this context, the Actor-Network Theory (Akkrich et al., 2006) could be usefully revisited in terms of Gaudenzi's (Gaudenzi, 2013) "living documentary". In both cases, human actors are considered in conjunction with system-generated actors, but each approach does this in its own way. This brings up other questions. How can the notion of "voice", as a central element of user empowerment, be enhanced in an i-doc and its online social networks? Should all voices be heard, or should they be editorially guided, or even "filtered", as a way to create a community-building identity? Who decides the criteria of an i-doc related online community identity? What are the ethical values of such a community? What role can user communities be encouraged to play in the life cycle of an i-doc even before its launch in the public sphere?

Such questions put on the spot the traditional linear and sequential logic of the audiovisual domain (pre-production, production, post-production). It calls on them to take on board the importance of giving a place and role to users at the onset of the design process.

Questions about the development of i-docs could be inspired by the iterative and incremental methods of the video game industry and software engineering (*e.g.,* the 12 principles of the *Manifesto for Agile Software Development*; Beck et al., 2001), notably in their capacity to integrate authoring issues through self-organization, team work and flexible responses to change. In the coming years, it is difficult to envisage living and empowering non-fiction films and i-docs without such features and the challenges that such a development entails for designers.

13.8 References

Akrich M., Callon M., Latour B. (2006) Sociologie de la traduction: textes fondateurs. Presses de l'École des Mines, Paris

Akrich M. (2006) La description des objets techniques. In: Akrich M., Callon M., Latour B. (eds) Sociologie de la traduction: textes fondateurs. Presses de l'École des Mines, Paris

Barats C. (2013) Manuel d'analyse du web en sciences humaines et sociales. Armand Colin, Paris

Beck K., Beedle M., van Bennekum A. et al. (2001) Manifesto for Agile Software Development. Agile Alliance, URL, March 9, 2014 : <http://agilemanifesto.org/principles.html>

Bouchardon S. (2009) Littérature numérique: le récit interactif. Hermès Lavoisier, Paris

Candel E., Gomez-Mejia G. (2013) Signes passeurs et signes du web: le bouton like, ou les ressorts d'un clic. In: Barats C. (ed) Manuel d'analyse du web en sciences humaines et sociales. Armand Colin, Paris, p. 141-146

Casla M., Poveda D., Rujas I. et al. (2008) Literary voices in interaction in urban storytelling events for children. Linguistics and Education, 19, p. 37-55

Corbeill A. (2004) Nature Embodied: Gesture in Ancient Rome. Princeton University Press

Corbin J., Strauss A. (2007) Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory. SAGE, 3rd edn, London

Daniel S. (2012) On Politics and Aesthetics: A Case Study of 'Public Secrets' and 'Blood Sugar'. Studies in Documentary Film, 6 (2), p. 215-227

Di Crosta M. (2009) Entre cinéma et jeux vidéo: l'interface-film, Métanarration et interactivité. De boeck, Bruxelles

Dupuy J.-P. (2008) Structure of a Web page: text and paratext. Journal of Human Mediated Interactions, 9(1), p. 25-42

Elias N. (1993) Engagement et Distanciation. Fayard, Paris

Faucher K. (2013) Thumbstruck: The Semiotics of Liking via the "Phaticon". Semiotic Review, URL, March 10, 2014: <http://semioticreview.com/index.php/open-issues/issue-open-2013/12-thumbstruck-the-semiotics-of-liking-via-the-phaticon>

Flichy P. (1995) L'innovation technique, récents développements en sciences sociales. Vers une nouvelle théorie de l'innovation. La découverte, Paris

Fourmentraux J.-P. (2005) Art et internet: les nouvelles figures de la création. CNRS, Paris

Gantier S. (2014) Recueil des données portant sur le projet de recherche B4. Technical report for the research unit "DeVisu", University of Valenciennes and Hainaut-Cambresis, Valenciennes

Gantier S. (2012) Le web-documentaire un format hypermédia innovant pour scénariser le réel? In: Degand A., Grevisse B. (eds) Journalisme en ligne. De boeck, Bruxelles, p. 159-177

Gantier S., Bolka-Tabary L. (2011) L'expérience immersive du web documentaire : études de cas et pistes de réflexion. Les cahiers du journalisme, 22-23, URL, March 10, 2014: <http://www.cahiersdujournalisme.com/cdj/pdf/22_23/08_BOLKA_GANTIER.pdf>

Gaudenzi S. (2013) The Living Documentary: from representing reality to co-creating reality in digital interactive documentary. Ph.D. thesis, Goldsmiths (Centre for Cultural Studies), University of London

Georges F. (2009) Représentation de soi et identité numérique: Une approche sémiotique et quantitative de l'emprise culturelle du web 2.0. Réseaux, 154, p. 165-193

Jeanneret Y., Souchier E. (2005) L'énonciation éditoriale dans les écrits d'écran. Communication et langages, 145, p. 3-15

Hymes D. H. (1996) Ethnography, linguistics, narrative inequality: Toward an understanding of voice. Taylor & Francis, London

Labour M. (2014) Understanding users' informational constructs through the affordances of Cinematographic images. In: Ibekwe-Sanjuan F., Dousa T. (eds) Theories of Information, Communication and Knowledge. Springer-Verlag, Heidelberg, Chapter 10

Moggridge B. (2007) Designing interactions. MIT Press, Cambridge

Nash K. (2014) What is interactivity for? The social dimension of web-documentary participation. Continuum: Journal of Media & Cultural Studies, 28(3), p. 383-395

Mucchielli A. (2006) Un cadre de référence pour "l'approche communicationnelle des TIC". In: Mucchielli A. (ed) Le dialogue avec la technologie. Armand Colin, Paris, p.7-35

Paillé P., Mucchielli A. (2012) L'analyse qualitative en sciences humaines et sociales. Armand Colin, Paris

Perec G. (1980) La vie mode d'emploi. Librairie générale française, Paris

Rouquette S. (2009) L'analyse des sites internet: une radiographie du cyberespace. De Boeck, Bruxelles

Souchier E., Jeanneret Y. (2002) Ecriture numérique ou médias informatisés? Pour la Science, Dossier hors-série « Du Signe à l'écriture », 33

Souchier E., Jeanneret Y., Le Marec J. (2003) Lire, écrire, récrire: objets, signes et pratiques des médias informatisés. Centre Georges Pompidou, Bibliothèque publique d'information, Paris

Tardy C., Jeanneret Y. (2007) L'écriture des médias informatisés: espaces de pratiques. Hermès Lavoisier, Paris