INTERACTIVE DOCUMENTARY:

A PROPOSED MODEL AND DEFINITION

Baker Alkarimeh
Doctorant, Laboratoire I3M
Université de Toulon, BP 132 83957 La Garde Cedex
baker.alkarimeh@yahoo.com

Eric Boutin
Professeur des Universités, laboratoire I3M
Université de Toulon, BP 132 83957 La Garde Cedex
boutin@univ-tln.fr

Résumé

Cet article propose une définition d'un nouveau type de documentaire dit *documentaire interactif* à partir de trois angles: l'utilisateur, l'interactivité et le documentaire. Il propose un modèle ainsi qu'un argumentaire critique.

Mots-clés

Documentaire interactif, interactivité, utilisateur, documentaire, interactivité perçue.

Abstract

This paper proposes a definition of the new type of documentary so-called *interactive documentary* from three points of view: user, interactivity and documentary film. A proposed model is offered and an argument concerning the elements of the model is also discussed.

Keywords

Interactive documentary, interactivity, user, documentary film, perceived interactivity.

INTRODUCTION

The aim of this study is to provide a conceptual model that can assist in defining and analyzing the interactive documentary[1]. This type of documentary has emerged as a result of the advanced technology and the transformation from Web1.0 to Web 2.0. The technological features have progressively activated the latent interactive aspects in the linear documentary such as two-way communication in the real time. Those features have also reformulated the relationship between the viewer, the author and the narrative. The presented model in this study provides the fundamental components of the interactive documentary: user, interactivity, and documentary.[2] It analyses the interactive documentary in the terms of these components in order to propose a convenient definition.

However, despite the new genre of documentary has several term, the term *interactive documentary* has been recently applied in many studies without a precise definition (e.g., Almeida & Alvelos, 2010; Choi, 2009; Galloway et al., 2007; Gaudenzi, 2013; Gifreu, 2011). The attached adjective *interactive* that derived from the noun *interactivity* may generally become a source of concerns for many, because of the vast arguments that the term *interactivity* has caused during the last decades.

The term *interactive documentary* or I-doc as a shortcut raises other questions related to documentary film itself such as the problems of definition (see Nichols, 1991), and the problems of reality or *representing reality,* which it has been considerably correlated with documentary in many definitions, since the first adoption of the term *documentary* by Grierson (Eitzen, 1995). Furthermore, the word *documentary film*, without the adjective *interactive*, indicates generally nonfiction-linear documentary. Once the term *documentary film* appears, traditions related to the theoretical framework also rise to the surface; technical operations that documentary film processes through until be received by the viewer; and then the potential relationship between the linear documentary and the viewer. This relation has usually been considered as *passive relationship*, because the disability of a system to create a real feedback between viewer and filmmaker.

The term *documentary*, however, is coined with the attached adjective *interactive*, to imply that there are at least two members in the process of sharing or interacting not into unlimited extent, but rather in the space of documentary film as a non-fictional structure. On the other hand, the adjective *interactive*, is associated generally with *interactivity* which imposes several questions that have always caused heated debates amongst scholars: what is interactivity? Is it characteristics of the medium? (e.g., Coyle & Thorson, 2001; Fiore & Jin, 2003; Raney et al.

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[1] the type of documentary 'interactive documentary has different terms such as: "i-doc" "cross-media doc", "locative doc", "transmedia doc", "new media doc", "docugame", "touch doc" and "web doc".

[2] The term *documentary* in this study refers to the linear documentary and to its traditional concepts such as *representing reality* and *narrative structures*. However, linking the interactive documentary, in this study, with the traditions of linearity suggests that the interactive documentary is still connected with its traditional legacy, but at the same time, with the vast technological changes, it has enormously developed and reformuated these traditional concepts, and especially the realationships between the filmmaker, the narrative and the viwer.

2003; Sundar, Kalyanaraman, & Brown, 2003). Is it user's perceptions? (e.g., Jee & Lee, 2002; Hwang & McMillan, 2002; Wu 1999). Or is it a communication process? (e.g., Rafaeli, 1988; Rafaeli & Sudweeks, 1997; Rogers, 1995; Stewart & Pavlou, 2002). Or is it a combination of all the previous three dimensions? (e.g., Coyle & Thorson, 2001; Heeter, 1989; Lieb, 1998; Macias, 2003; McMillan, 2002; Zack, 1993).

Subsequently, documentary film as a traditional form recalls overall the process that the film is made up through, and the continuous controversy about the appropriate definition. The presence of documentary on the Internet and the use of interactive features provided by technology raises a complicated question more than others: are we still talking about documentary film as linear form? In other words, should we classify what is online and looks like a traditional documentary, as documentary film? Or should we deal with this new emergence far cry from the linear documentary? Are we facing a separated or connective relationship with the traditions of linear documentary? Because if we admit that we are in contact with linearity, we are almost obliged to deal with documentary film not only as an emergent form, but with its stuck problems since its first appearance on the screen. Otherwise dealing with it as a separated genre from linear documentary, alternative methods out of traditional documentary are the way to go.

Furthermore, as has been said earlier, the adjective *interactive* requires a presence of the undefined user, and frames him/her into a relationship described as an interactive relation with the documentary film. In addition to the term, there are constant assertions of many scholars that interactivity is only potential (e.g., Jensen, 1998; Rafaeli, 1988). Nevertheless, the user seems to be virtually absent from the scene for several reasons: some studies on interactivity and interactive documentary deals with the user as an interactive member without providing empirical studies of his interaction. Another possible reason, so far most of studies and definitions came to classify this type of documentary through technological aspects and the user was only theoretically conceptualized (e.g., Galloway et al., 2007; Gaudenzi, 2013; Nash; 2012). Moreover, there is a lack of empirical studies on the relationship between the user and the interactive documentary. It can be assumed that interactivity is designed to engage the user within a system, but it is not known how the user perceives it, and how he deals with it, especially in interactive documentary.

Another problem could also rise when discussing interactivity under the framework of interactive documentary: while several researches have recently worked on the user's perceived interactivity especially in advertising and marketing (e.g., Jee & Lee, 2002; Hwang & McMillan, 2002; Wu 1999; Wu, 2000), experimental studies in this field vary in their results. This suggests more experimental studies should be applied in an attempt to understand empirically the relationship between the user and the interactivity, but in the context of documentary story. Interactivity or interactive documentary as a relative concept is not a concept that can be solely defined. It is a relational concept not only related to the user's perceptions, but also to the subject or to the story of the film that uses interactivity as technological aspects to convey a message to the audience. Therefore, it is not about interactivity, although it plays a big role, it is about the storytelling and about the user.

Before presenting the model of interactive documentary, the article is going to address firstly the major differences between linear and interactive documentary, and then the existed definitions of interactive documentary.

LINEAR AND INTERACTIVE DOCUMENTARIES

With a release of *Nanook of the North* (1922) by Robert Flaherty, a new age of motion picture had started. With the word *documentary* 1926 adopted by Grierson, a new way of studies had also launched. Since then, most of linear documentary theorists have continuously attempted to define the *documentary*. The problem was and still that the word *documentary* has been always associated with a critical concept called *reality*. Reality as a relative concept to the documentary film continued to be as a distinguished and comparative concept, not only because of early definitions such as Grierson's definition "the creative treatment of actuality" (Grierson & Hardy, 1966, p.13), but also because the vast attempts from theorists to distinguish the documentary from fiction film. Associating reality with documentary has made most theorists struggle to have suitable or determined definition of documentary. Nevertheless, there seem to be some agreements that the documentary film can have some keywords to make it distinguishable and comprehensible: It is non- fiction story, which attempts to represent what is already existed or to be existed even with reenactment.

On the other hand, representing reality and interactivity are the two major complex issues that could shed a light on the differences between interactive and linear documentaries. But because the new genera *interactive documentary* still preserves and shares with linear documentary the word *documentary*, the complicated problems concerning reality or representing reality resurface again. There is almost no book or article about documentary without making the term *reality* as a major issue to be addressed and argued (e.g., Black, 2002; Jerslev, 2002; Nichols, 1991; Godmilow& Shapiro, 1997). The number of books and the constant insistence on the concept could mainly mean, that *reality* is a skeptical concept that does not exist out of our mental contexts. Reality as a comparative and distinguished concept of documentary from others can fail to answer these questions in the space of documentary: What is reality? Which reality are we referring to? And what kind of standard can be used to indicate that this is real, or this is not real.

In this study, reality in both documentaries could be understood as a symbolic and creative concept, or as an observed and chosen one from other potential realities beyond our senses and representations. This particular version of reality can be termed as a documentary's reality pertained to the film itself as a product that has its own meaning of comprehending reality. On the other hand, there are three possible realities representations when discussing documentary: the reality of director, narrative and viewer (Nichols, 1991).Though the filmmaker as an observer wants to convey a certain reality to his/her audience, the proposed viewer also has his/her own version of the represented reality.

However, both linear and interactive documentaries could be at least distinguished from the fiction film. They both attempt to provide what is already existed in the observed world within a certain vision, technical, artistic and mental arrangements. In other words, the documentary is not a monocular reality from different angles, but a chosen one from various others. The fiction film, on the contrary, is intentionally meant to create a reality as a whole in artistic and dramatic conception.

However, linear and interactive documentaries have some similarities that they both attempt to provide certain facts of what is supposed to be *real*, or at least, there seem to be broad lines connecting both of them together when attempting to provide a certain reality. These broad lines that connect both of them could nevertheless create several variations when representing reality, and when evoking the nuances between traditional documentaries themselves. The advanced technology, from filming and editing to distribution, has given the new arrival *interactive documentary* a different degree of representations in terms of image quality, color, accuracy, details, speed, flexibility, etc. In short, linear and interactive documentaries share at least the concern of providing what we can observe as human beings with our senses such as geography, culture, people, etc.

Further, interactivity as features of the medium has frequently changed the three main structures of the classical documentary: the author, the narrative and the viewer. The viewer has the chance to choose and control the contents and the time while watching an interactive documentary. It has given him/her a significant role to be as an assistant director where he/she can add to or modify the contents. This shifting of roles has gradually led to diminish the absolute control of the classical authorship and the unmodified narrative. In the traditional documentary, for example, the narrative of documentary is not changeable, while it is conversely nonlinear, influenceable and variable in the age of interactive documentary.

The narrative of the interactive documentary might nevertheless be considered less coherent construction In comparison with the linear documentary. It is basically a proposed narrative, although in many cases, it is built on the criterions of interpersonal communications. This kind of presumed logic depends physically and cognitively on the viewer to activate it and reorder its structure. It is thus a participatory logic that breeds from the ongoing interactions. Therefore, reality has become more potential or can be practically chosen among multiple others. In a sense, the viewer is physically and mentally participating in the creation of the proposed reality.

As said previously that reality, created by the viewer in the classical documentary, is generally a modified version of the director's represented reality, but it is a structural version depends on how the viewer understands it and interprets it. The viewer here, as in interactive documentary, can adjust, add, create and produce an entire version of the represented reality, but this version remains in the cognitive limits, in the framework of imagination. All these cognitive interactions are based on the flexibility of the director's version of reality to accept the cognitive addition or modification.

DEFINITIONS OF INTERACTIVE DOCUMENTARY

There are few definitions of interactive documentary, because it is probably still regarded as an emergent form. Miller's (2004) definition of interactive documentary focused on user's choice. Goodnow (2004) concentrated on physical interactivity that the user can experience when involving with interactive documentary. Restricting interactive documentary within physical interactivity is critical, because even physical interactivity is basically based on cognitive processes. Interactive documentary is not only a physical interactivity, but rather it is both physical and cognitive interactivity. Berenguer (2004), however, stated that hypertexts and games led to the interactive narrative. This interactive narrative spread in three directions: interactive narrative, interactive documentary and games. Whitelaw (2002) declared that interactive documentary "offers its own ways of playing with reality" (p. 3). These definitions have dealt with interactive documentary as a development of linear documentary (Gaudenzi, 2013). On the other hand, these definitions are generally limited to the certain aspects of interactive documentary.

However, Galloway et al. (2007) limited the concept of interactive documentary into a "delivery mechanism" (p. 12). Although this definition is limited to "delivery mechanism", the proposed classification of interactive documentary gives an important role to the user (Gaudenzi, 2013). The models that developed by Gallowy et al. (2007) are: the Passive Adaptive, where the unconscious user is observed and given content depending on his responsiveness; the Active Adaptive, where the conscious user is in the control of documentary contents; the Immersive model, where is the user is fully involving with the documentary as in *virtual reality*; and finally the Expansive model, where the user is allowed to add to and modify the contents of the documentary.

Nash (2011) used the term webdocumentary and defined it as "a body of documentary work, distributed via the Internet that is both multi-media and interactive" (p.197). Once again, despite this definition concentrates on distribution, Nash's classification gives the user a distinct role in three categories: narrative, categorical, and collaborative webdocumentaries. In the Narrative Webdocumentary, even that this type is similar to traditional documentary in specific points, but the user is allowed to interact with the specific points of narrative such as in the documentary *Prison Valley* (2010) by David Dufresne and Philippe Brault as an example of this category. The Categorical Webdocumentar, he focal element in this type is its structures, where the user can freely choose the story or the video he likes from a bunch of other stories, such as the French interactive documentary *7 Billion Others* (2003); and lastly, the collaborative webdocumentary like the Egyptian interactive documentary *18 Days in Egypt* (2011), where the user is actively contributing contents and sharing with others. These structures of the webdocumentary excluded other types of interactive documentaries such as locative documentaries, performances or exhibitions or docu-games.

Gifreu (2011) adopted Nichols's definition of documentary that grounded on three items: author, narrative (text) and interactor. His definition of interactive documentary is limited to offline-online digital documentary and does not include other forms (Gaudenzi, 2013). Nevertheless, the significant of the proposed definition is the attempt to understand the user based

on "the degree of participation" (Gifreu, 2011, p. 351). In the same context, Gaudenzi (2012) suggested that I-doc:

> *Should not be seen as the uneventful evolution of documentaries in the digital realm but rather as a form of nonfiction narrative that uses action and choice, immersion and enacted perception as ways to construct the real, rather than to represent it. (p. 125)*

She analyzed I-docs through their interactive logic and proposed four modes of i-Documentary: the conversional mode, the hypertext mode, the participative mode, and the experimental mode. In the first mode, the user involves with seamless interaction in a way of conversation with computer, such as the interactive documentary *Gone Gitmo* (2007) by Nonny de la Pena. In the hypertext mode like the film *Journey to the End of the Coal* (2008) by Honkytonk Films*,* the user is an explorer through hypertexts that can lead him to internal and external pages, images, sounds and videos. In the third mode such as the film *Global Lives* (2009) by David Harris, the two-way communication between user and author is possible. The user is not just exploring the content but he can have an active presence throughout involving the online production such as editing and shooting. Finally, in the last mode, the user is physically involving with such documentaries, experiencing the virtual reality as in the interactive locative documentary *Rider Spoke* (2007) by Blast Theory team.

Based on previous definitions of interactive documentary, it is obvious that the definitions revolve around measuring certain aspects or dimensions or sub-concepts of the term or other relative terms. In a very common sense, there are general agreements amongst these definitions and classifications on the three components that can help to define the interactive documentary: interactivity, user and documentary. Nevertheless, these three components, which can coin the term *interactive documentary*, are fragmentally organized or operationalized in previous studies. For example, although some of the previous studies do not include the user in their definitions as an essential factor for constructing an interactive documentary, or for having an interactive experience with the new genre, their classifications of interactive documentary reconsider the prominence of user, and give him a significant position. This could generally indicate that there are some inconsistencies between theorizing and classifying the interactive documentary, which all could lead to various conflicts in the results. Therefore, this paper is an attempt to put together the three components of interactive documentary *interactivity, user and documentary*, in order to facilely theorize, analyze and classify the interactive documentary.

PROPOSED MODEL OF INTERACTIVE DOCUMENTARY

Interactive documentary could be understood as a relational concept through three main aspects: (a) interactivity as characteristics of the medium and as a communication process; (b) user as perceived interactivity and physical involvement;(c) and lastly, documentary film as authorship and narrative.

Conceptual Model of Interactive Documentary
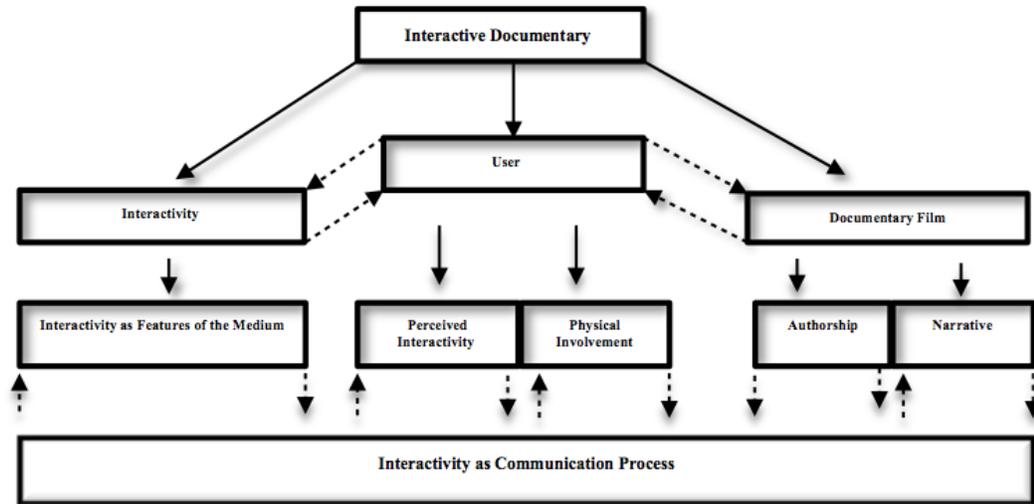
In this model, it is important to note that the three structures: *interactivity, user, and documentary film* depend on each other to produce an interactive documentary, and an interactive experience. It is difficult to understand interactive documentary without comprehending the psychological, physical and cognitive behaviors of the user. In other words, interactive documentary gains its existence and meaning from the user's interaction with its content. Therefore, William Uricchio (2016) insists, in an interview about documentary's future that "success in interactive domain is really about engagement". User here is understood from two directions: user's perceived interactivity and user' physical involvement. However, interactivity as characteristics of the medium has no meaning if the user does not use it. Thus, in this model, it can be seen that interactivity, user and documentary film are in a dual correlation (two-way communication) and all are pouring in interactivity as a communication process.

The rest of this paper is structured to explain how these three components: *interactivity, user and documentary film* are in a dual correlation for producing an interactive documentary.

INTERACTIVITY

Interactivity in this section includes interactivity as features of the medium and interactivity as communication process. In several studies, interactivity is divided into: features of the medium, perceived interactivity, communication process and/ or the whole three previous variables. However, this paper excludes the perceived interactivity from this section, and includes it in the user's section for it is firstly considered as the user's reaction, or as a dependent variable of the technological aspects, and for better organizing and analyzing the structures of interactive documentary. In addition, interactivity is operationalized and comprehended as not only a

combination of technological features, perceived interactivity and communication process; but rather, it is a combination of the previous dimensions or variables alongside with the story of the documentary.

Interactivity as Features of the Medium

As it is described in the model above, interactivity can be understand as features of the medium and as a communication process. Interactivity as features of the medium is defined: "by focusing on the features of a medium, or capabilities of creating interactive content or messages or potential for interaction" (Wu, 2005). Therefore, those who consider that interactivity as characteristics of the medium, tend to determine concepts like *low* and *high mediums* according to their technological aspects. Technology, therefore, provides documentary film with unique elements that can be summarized in three key attributes: two-way communication, user's control, and real-time responsiveness.

The technological revolution and the existence of network 2.0 have enabled the users of the Internet to be active members. The one-way communication has become two-way communication. The users of the Internet 2.0 have the ability not only to communicate with others in real-time, but also to become influential over the message content. This shift in the world of communication was accompanied with a change in the nature of communication process as a whole: sender, medium, message and receiver. Sender is no longer the traditional one as it is the case of medium, message and receiver. Moreover, communication process between the user and the Internet has reinforced the growth of the Internet services. It has also changed the nature of the traditional user. Both the Internet and the user are profoundly dependent on each other, where this kind of dependency has significantly grown the communication channels and online services. The services offered by the Internet, software and applications by computer have recently furthered the emergence of the independent filmmakers, who have become able to make their own films without the need for major companies. Furthermore, they have become able to distribute their works internationally. In the light of this technological development, the documentary film did not stand idly, but rather it sought to benefit from this global network, and borrow from it the technological aspects in order to express itself in this competitive age.

On the other hand, degree of interactivity as Aoki (2000) suggested "may be measured by the number of tools presented in a website" (p. 5). Coyle and Thorson (2001) recommended that websites "should have good mapping, quick transitions between user input and resulting actions, and a range of ways to manipulate the content" (p. 76). Similarly, Steuer (1992) in his definition of interactivity focused on: speed, mapping and range. Sohn, Ci and Lee (2007) determined three groups of features that make a web site interactive: hyperlinks/clickable buttons; graphics, animation, and sound; and channels for online communication, transaction, and feedback. Gifreu (2011), however, called the technological aspects used by interactive documentary "navigation and interaction modalities" (p.356).

Interactive documentary allow its users to not just viewing the content, but rather to engage into different levels of interactivity such as clicking on hyperlinks, which would lead to different internal and external pages or other different videos, such as *Forgotten Flags* (2007) and *Moss Landing* (1989) interactive documentaries. Some of these interactive documentary projects allow even the user to add or change the content of the documentary such as the documentaries *Global Lives* (2009) and *18 Days in Egypt* (2011).

Technology in general is but potential or a suggestion to interact. Accordingly, despite of levels of interactivity that interactive documentary can provide, what in fact interactivity provides is just the possibility of interaction. Therefore, Rafaeli insists that "Interactivity is potential adequacy, but it is up to the communicators to realize it" (p. 117). Similarly, Jensen (1998) also stated in the same context that interactivity is "a measure of a media's potential ability to let the user exert an influence on the content and/or form of the mediated communication" (p. 201). In the proposed model above, interactivity as features of the medium is flowing in two-way communication connecting all elements in the model with each other. It is a constant insistence that none of these components can soly work and be able to creat an interactive experience.

Interactivity as Communication Process

Interactivity as a communication process is the second important part of interactivity as a main element for producing an interactive documentary and experience. Many scholars consider interactivity as communication process (e.g., Rafaeli, 1988; Rafaeli & Sdoeix, 1997; Rogers, 1995; Stewart & Buffalo, 2002).

Rafaeli(1988) defined interactivity as "an expression of the extent that in a given series of communication exchanges, any third (or later) transmission (or message) is related to the degree to which previous exchanges referred to even earlier transmissions" (p.111).

Rafaeli's model of interactivity is very important for developing and analyzing the model of this study, where its entire elements are flowing in the interactivity as a process of communication. He firstly distinguishes between interactive, reaction, and interactive responsiveness. In Rafaeli's model, as it is explained by Ariel and Avidar (2015), there are three possible messages in communication process. In the first type of message that generates a declarative communication, the message is considered to be always one-way communication, but both sender and receiver could exchange the role or the process of communication. This responsiveness could be at the lowest level of interactivity if these messages between the members of communication process do not refer to each other.

Two-way communication is the second type of message that produces reactive or responsive communication. Both receiver and user are able to exchange the role of communication. These messages between them concentrate on required information such as computer games, where the game software can react to a user's action and vice versa (Ariel &

Avidar, 2015). Two- step flow of communication between user and receiver is the third type of message that creates an interactive communication. The message in this type of communication does not only refer to a previous round, but also to the previous rounds. This type of interactive communication could occur between two persons in actual life or two persons through a platform, where the communication between them is a constrictive process. This means that each message will build itself referring to the previous ones, and will encourage each other (Ariel & Avidar, 2015).

In the same matter, Avidar (2013) developed Rafaeli's model of interactivity and presented a new model so-called "responsiveness pyramid" that distinguishes between responsiveness and interactivity, and it suggests that:

> *All messages sent as a reaction to a previous message are responsive, although they can be non-interactive (a response that does not refer to the request), reactive (a response that solely refers to the request), or interactive (a response that refers to the request and initiates an additional turn/s) at the same time. In other words, an interactive response is a highly responsive message. (Ariel & Avidar, 2015, p. 23)*

However, Heeter (2000) defined interaction as "an episode or series of episodes of physical actions and reactions of an embodied human with the world, including the environment and objects and beings in the world". (p. 7). In different position in the same study, she limited the interaction on the interaction experience by the participant who is "capable of observing through one or more senses over whatever channels exist to connect the participant to the experience". (p. 11). Thus, interactivity as a communication process "is what occurs on the channels, not the channels themselves or their characteristics. The technology affords the interactivity but does not define interactivity" (Tremayne, 2005, p. 41).

In the model of this study and based on Rafaeli's model, communication process refers to the profound correlation between all structures of interactive documentary. It is the interrelationships that could produce an interactive documentary and an interactive experience. It is, however, a continuous process between each structure and the other in order to build a reciprocal meaning, and reconstruct an interactive story, based on the level of interactivity, participation of the user and development of the documentary's interactive narratives. Two- step flow of communication, as a high interactive communication is the core of this model, where each structure in the model is not only performing as a passive sender or receiver, but as an interactor who/or, which keeps the communication flowing. As a result, depending on the way the communication is flowing, the level of interactivity between the members of interactive documentary can be determined, reevaluated and developed.

USER

In the model of this study, user is understood and operated into perceived interactivity and physical involvement. He/she is the main element that occupies the top center of the model,

because one of his/her responsibilities is to give the interactive documentary a meaning, and to keep the communication flowing. Interactive documentary could be well constructed in terms of the technological aspects and the story, but that all works in vain if the user does not activate the possible interactive characteristics of the medium that holds the documentary story.

User's Perceived Interactivity

Perceived interactivity, as it is shown in the model, is an essential approach to comprehend and analyze the interactive documentary through the perception of user. Perceived interactivity is defined as "a psychological state experienced by a site-visitor during the interaction process" (Wu, 2005, p. 30). Newhagen et al. (1995) was one of the first studies to deal with interactivity as individuals' perception. Later, Wu (1999) measured perceived interactivity of individuals.

There are several studies in certain fields such as advertising and marketing that applied perceived interactivity to measure the relationship between interactivity as features of the medium and as the user's perception of those features. Results from these studies were significantly varied: while some studies found a significant positive relationship between both variables (e.g., Cho & Leckenby, 1999; Hwang & McMillan, 2002; Jee & Lee, 2002; McMillan, 2000; Wu 1999; Yoo & Stout 2001); others did not find the same significant correlation (e.g., Bezjian- Avery, Calder, & Iacobucci, 1998; Coyle & Thorson, 2001). On the other hand, many definitions that have dealt with interactivity as a perception focused on two elements that can be found in Wu's (2005) scale, which includes: perceived control and perceived responsiveness[3].

Therefore, the user's perceived interactivity is comprehended and operated within the frame of perceived control and perceived responsiveness. These two categories of the user's perceived interactivity may reflect the way that the interactive technological design its tools in order to meet the user's needs. On the other hand, perceived control as a partial element of the percieved interactivuy is the user's feeling that he has control over the website, content and speed. Essential difference that modern technology has profoundly made is the transition from linear relationships between *user, authorship and product/ story* to non-linear correlations. Interactive documentary with using interactive features has recently created new channels for the user to move from passive recipient to interactive member. Notwithstanding the technological features such as mapping, hypertexts give the user more control and choice over navigation, content and speed, they remain basically a facilitative channel, since the whole process depends on the user's perception. Therefore, it may be argued that there is no interactivity outside the user's mind.

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[3] Wu's (2000) scale in fact includes also perceived personalization with regard to "(a) acting as if it were a person; (b) acting as if it wants to know the site visitor; and (c) acting as if it understands the site visitor" (p. 31). This paper does not include the last dimension because it seems as a result of perceived control and perceived responsiveness.

However, transition from linear documentary to interactive documentary gave the user theoretically and technologically more control than ever. It has become possible for the user to choose the proposed starting point by the author and navigate through other complex and connected options towards endless suggested points. In traditional documentary, in comparison, the production line is predetermined and mastered to go from one point to another without any possibility of modification.

Regardless of the degree or the type of control that the interactive documentary could provide, the final criterion is fundamentally based on how the user perceives this kind of control. In addition, although it is rather known the ability of technological features to provide control and choice to the user, it is little known about the user's perceptions of these features and their suitability to meet his/her needs. For example, Williams reported that "IDEO found that most people only use a few functions offered by state-of-the-art television, and that they tend not to readjust the controls once they have set them" (1996, p. 35). This may pose other questions whether the number of interactivity's features could lead to energize or fatigue the user. More recently, Nilson (2006) stated that there is a participation inequality on the Internet with only 1% of people creating content, 9% editing or modifying that content, and 90% viewing content without actively contributing. This suggests that there is still lots of work should be done on understanding how the user comprehends this control through empirical studies on the relationship between the user's perceptions and interactive documentary.

On the other hand, perceived responsiveness as a second category of the user's perceived interactivity concentrates on exchanging communication in real-time with a system, other users, applications and products. At first glance and comparing with the linear documentary, one can simple argue that the interactive documentary has the indispensable technology that allow the user to exchange interpersonal communication, and interacts with the offered interactive story in real- time. But the problem lies in the sense of two-way communication, real-time, and how user perceives both concepts.

Two-way communication is not the only attribution of interactivity. Communication experiences may occur from one user to another and from multi-users to multi-users. These experiences could also refer to the degree of involved reactions (e.g. Hoffman & Novak, 1996; Rust & Oliver, 1994). On the other hand, Leary (1990) confirmed that the success of the medium is about having aspects that look similar to interpersonal communication. Apparently, interpersonal communication is regarded as a criterion for judging the interactive experiences (e.g., Bretz, 1983; Heeter, 1989; Williams et al., 1988). Making two-way communication through intermediate environments similar to interpersonal communication is a critical problem, because most interactive experiences are linked to mediate environments, which is not the same case in the interpersonal communication (Kiousis, 2002). Accordingly, Schudson (1978) criticized the use of interpersonal communication as a standard to have or judge interactive experiences. Later, Kiousis (2002) proposed to use a wider concept other than interpersonal communication.

However, real-time is considered essential factor in many studies related to the perceived interactivity (e.g., Lombard & Ditton, 1997; Zeltzer, 1992; Wu, 2005). Linking interactive communication with real-time makes means of communication more attractive (e.g.

Finn, 1998; McMillan, 2000), although it should be a distinction between the flexibility of time and speed (Kiousis, 2002). Therefore, Kiousis (2002) proposed a distinction between speed and the perceptions of speed, because it is poorly explained in the interactive studies, and because what the users perceive is different from the standards of medium or system. For example, the user at the present time might consider the speed of the Internet as an ideal speed, but a decade ago, where the Internet was slower, the user at that time did not perhaps feel the same way (Kiousis, 2002).

It should be noted that there is a lack of studies on perceived interactivity regarding interactive documentary. User is almost absent from the empirical studies on interactive documentary. Consequently, perceived interactivity cannot just be brought from other fields and operationalized on this documentary genre. Each field has its own perceived interactivity that functions alongside with other aspects related to the nature of the product itself. User's perceived interactivity in the interactive documentary varies from other fields such as advertising and marketing, because it is linked to the framework of the documentary story. It is also affected by other factors such as user's mode, web skill, etc. These aspects can give different meaning to the documentary in general, and can be variously interpreted by the user.

User's physical Involvement

As it is shown in the model of this study, physical involvement as other elements is a significant factor to understand the interactive documentary. It refers to the physical behavior of the user when dealing with interactivity offered to him by an interactive documentary. This physical behavior is related to navigation, browsing, clicking, writing or commenting, editing and producing. In some documentaries that use 3D technique and virtual reality gaming such as *JFK Reloaded* (2004), *One Millionth Tower* (2011) and *The Virtual Revolution* (2009), and the physical actions of the user could be unconsciously broader and more intensive (Galloway et al., 2007)

As argued earlier, the difference between linear and interactive documentaries is that the linear type is based on cognitive activity. When the user watches a linear documentary, he/she interacts within imaginative and cognitive way. The level of cognitive interaction is varied depending on the subject of the film itself, and on the user's psychological structures. In interactive documentary, the user is insisted, in addition to the cognitive effort, to exert a physical effort to get the information and interaction. The physical effort is varied and built on the type of interactive documentary and its subject. Thus, a number of (browsing, clicking, etc.) alongside with the time the user spends involving with documentary may determine the level of interactivity. They could also determine the theoretical and practical framework for evaluating the communication processes and experiences in interactive documentary.

Each interactive behavior of the user is fundamentally expressing a physical and cognitive map or plot of reproducing, or reediting and redirecting the documentary. In other words, each physical engagement of the user could provide unlimited scenarios, where each user is able to rewrite and reproduce his/her own documentary/reality from the represented one. The user is confronting an infinite network of documentaries within each interactive project. This unlimited

reproduction is, however, restricted to a number of important factors such as the budget, the size of distribution, advertising, the importance of the story, the flexibility of the options and the characteristics of the user.

Moreover, the physical maps of users, while interacting with an interactive documentary can be remarkably used and invested to draw firstly the cognitive production and direction of the users; and secondly to enhance the narrative of the interactive documentary in general.

Based on the above, each physical interactivity of the user should be separately defined and measure with a precise scale that can decipher its meaning. In addition to that, each unit of the physical interactivity should be linked to other ones under the framework of the documentary story. Therefore, finding a meaning of the physical activity might be extremely difficult, because, for example, the high number of clicks may not mean, as it is expected, a high degree of interaction. It may oppositely mean that the user is unable to find what he/she is looking for, or it may reflect that the user is, for some reason, disturbed or confused. Few number of clicking may mean, on the other hand, that the user is spending a hard time for comprehending the interactive project, or it may mean that he spends enough time to read a story or watch a video. However, each unit of the physical interactivity is associated with other factors such as: the time spent by the user viewing an interactive project; the cognitive interactivity of the user; and the proposed features of the physical interactivity within the interactive documentary project.

Furthermore, finding a scale to analyze the physical interactivity of user, while viewing an interactive documentary, could significantly be a very useful tool for: giving an identification to the unknown user; deciphering the reproduced story of the user by extracting the physical maps or cognitive plots; redefining the authorship or the project's designers; and lastly, reevaluating the units of interactive documentary.

DOCUMENTARY FILM

Documentary film is the third structure in the model of this study. It indicates that interactive documentary is still connected with the traditions of linear documentary as non-fictional story. In the model of this study, however, *authorship and narrative* as the main classical concepts of linear documentary are still presented in the space of interactive documentary, but as **critical** concepts, and with shifting in the roles, tasks and meanings. This kind of alteration has consequently affected the levels of representations of reality. User in the model is occupying the author's classical status at the top center of this model. The classical relationship between author, narrative and user is seemingly no longer the same.

Authorship

In the traditional documentary, author is understood as the main player for producing a film by using complicated techniques with regard to writing, filming and editing. The author is the only controller of the film sequences from the start point to the end. However, this role has

gradually started to vanish with the presence of interactive documentary, where the role of authorship falls back from the sole control over the film, to assistant or assistant author (Gifreu, 2011). Reiter (as cited in Gifreu, 2011) pointed out:

> *A very important point to study is the relationship established between the author and the reader, the ways of sharing the control between them and the chances the author has to establish, through this control transfer, the conditions for the receiver to fully enjoy and interact with the experience of interacting with the application, so that the planned knowledge transmission objectives are reached. [...] This particular relationship regarding the authorship suffers a marked change from the advent and evolution of the so-called collaborative web and, as a result of this transformation, all genres depending on it, have also suffered profound changes. (p. 8)*

Therefore, the rapid technological developments seemed to have diminished the presence of the author. The direction and tasks between both the author and the user have turned out to be more sophisticated and intertwined than ever. This may thus established a new age marked with undifferentiated roles.

Narrative

Narrative refers in this study to the documentary structure and to *representing reality* as core and controversial concepts that surrounded the documentary film since its first appearance.

The structure of the documentary film is essentially associated with sounds, images, videos, texts alongside with the features of interactivity when discussing interactive documentary.

In linearity, narrative structures cannot be modified if the viewer receives it. It is one-way communication from the author to viewer, and the feedback is usually passive, or at least limited. Narrative in linear documentary is generally a chronological narrative based on causes and effects, where each structure comes as a result or a reaction of the previous one. On the contrary, in interactive documentary, the narrative structures are interactive and exchangeable. User sometimes can even create the whole story of a documentary. Features, applications and modalities of interactivity have changed the nature of the narrative structure, and traditional editing tablets to meet the user's needs. Interactive documentary is new way of structuring reality without going in one straight direction from a starting point to the end. It is a complex of potential networks and structures that interact with each other in intertwined directions. The user, at this age of the Internet, is no longer the same. The Internet is currently teeming with information traffics including text, images, videos and sounds. With the increase in these options, it becomes very difficult to retain the user or even to attract him/her.

However, narrative also refers to the critical term called *representation of reality* (see Black, 2002; Jerslev, 2002; Nichols, 1991; Godmilow& Shapiro, 1997). Regardless of how reality is represented or constructed, what is known so far that this type of documentary is non-fiction trying to convey a message of what is happening in "historical world" (Nichols, 1991,

p. 25). What is represented in both linear and interactive documentaries is regarded as documentary, because it provides information, knowledge, and experiences from real life or at least what is considered to be real.

Reality provided by the interactive documentary is a participatory reality between the author and the user. Reality is no longer a solely product of the author. Instead, the user has become involved in this creative structure. It might be argued, however, that what traditional documentary provides is also a participatory reality, because when the user watches a documentary, he/she creates in return his/her own version of reality from a represented one. That is obviously true, but this version of reality remains in the imaginative world. User may generally preserve this imaginative version for himself/herself or share it with others under his/her interpretations. In contrast, the represented reality in interactive documentary is extraordinarily optional since it offers the possibility for the user to not only be imaginatively restricted to the represented reality, but instead, he can physically interact throughout multiple levels of interactivity.

Thus, although the concept of *representing reality* differs from one documentary to another, reality in both documentaries is seen as a participatory with some differences. In linear documentary, it is limited to the fact that the author creates his/her own version of reality, and the user reproduces the given version, but within a psychological analytical framework. In interactive documentary, in addition to above, both the author and the user are together creating or sharing the observed reality exchanging their roles.

PROPOSED DEFINITION

Based on previous model and relative discussion, interactive documentary could be understood, defined and analyzed as a relational concept through three main aspects: (a) interactivity as characteristics of the medium and as a communication process; (b) user as perceived interactivity and physical involvement;(c) and lastly, documentary film as authorship and narrative. Those three aspects of the interactive documentary are in a dual *correlation two-step flow way communication* pouring in interactivity as a communication process.

Therefore interactive documentary could be defined as "a structure of interactivity, user and documentary. It is a sort of non–fictional documentary that uses the Internet and benefits from the technological and interactive modalities. The interactive technology is employed to build the components of the documentary story in order to potentially convey an interactive communication with the user. In this communication process, the user is given varied degrees of control and choice to cognitively and physically activate the prospective interactivity, and give the story of documentary an interactive and exchangeable meaning".

CONCLUSION

Understanding interactive documentary requires a comprehension of the basic components that make a documentary interactive: user as *perceived interactivity and physical involvement*; interactivity as *features of a medium and as communication process*; and documentary film as *authorship and narrative*. This paper proposed a model for dealing with interactive documentary on the basis of previous basic components. It is, however, a proposal for analyzing and conceptualizing interactive documentary through these components. Therefore, it is important to understand that the basic components of interactive documentary are overlapping components. It is complicated to separately comprehend each one of them without measuring the impact of each of them on the other. There is almost a paucity of empirical research on the relationship between the user and the interactivity within the frame of interactive documentary.

Therefore, any attempt to understand interactive documentary without the presence of user's perceptions and physical actions could be considered insufficient, because it remains within the theoretical framework. On the other hand, the correlation of interactive documentary with other concepts of documentary film itself such as authorship and representing reality raises critical questions among scholars and makes the attempt of definition more difficult. Nevertheless, based on several definitions of interactive documentary and basic components generated from these studies, this study proposed a definition of interactive documentary, which can be regarded as a primary path to understand interactive documentary in an orderly manner.

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