The Living Documentary:

from representing reality to co-creating reality in digital interactive documentary

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I hereby declare that this thesis is entirely my work

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Abstract

This thesis concentrates on the emerging field of interactive documentaries. Digital interactive and networked media offer so many new possibilities to document reality that it is necessary to define what an interactive documentary is and whether there is any continuity with the linear documentary form. This research therefore proposes a definition of interactive documentaries and a taxonomy of the genre based on the idea of *modes of interaction* – where types of interactions are seen as the fundamental differentiator between interactive documentaries.

Interactivity gives an agency to the user – the power to physically "do something", whether that be clicking on a link, sending a video or re-mixing content - and therefore creates a series of relations that form an ecosystem in which all parts are interdependent and dynamically linked. It is argued that this human-computer system has many of the characteristics associated with living entities. It is also argued that by looking at interactive documentaries as living entities (*Living Documentaries*) we can see the relations that they forge and better understand the transformations they afford – on themselves and on the reality they portray. How does an interactive documentary change while it is being explored/used/co-created? To what extent do such dynamic relationships also change the user, the author, the code and all the elements that are linked through the interactive documentary? Those questions are discussed through the use of case studies chosen to illustrate the main interactive modes currently used in interactive documentaries.

This thesis is a first step in exploring the multiple ways in which we participate, shape and are shaped by interactive documentaries. It argues that interactive documentaries are ways to construct and experience the real rather than to represent it.

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Looking back at the path that I have followed while doing this PhD I realise how non-linear the route has been. Going from A to B was achieved through trying many routes, sometimes taking U-turns and often walking backwards only to try a new direction. Many times I felt lost, and finding a new route was not always easy. I would like to express my deep gratitude to all the friends, family and colleagues who, at one moment or another, have helped me. Some gave me practical help, others just encouraged me. Without them I would have run out of steam a long time ago.

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Glossary of terms

Analogue
A form of representation, such as a chemical photograph, a film, or a vinyl disc, in which a material surface carries continuous variations of tone, light, or some other signal. Analogue representation is based upon an unsegmented code while digital medium is divided into discrete elements.

Algorithm
A series of instructions – a recipe or formula – used by a computer, or program, to carry out a specific task or solve a problem. The term is generally used in the context of software to describe the program logic for a specific function.

Assemblage
The theory of assemblages considers that entities on all scales (from sub-individual to transnational) are best analysed through their components (themselves assemblages). The relationship between an assemblage and its components is complex and non-linear: assemblages are formed and affected by heterogeneous populations of lower-level assemblages, but may also act back upon these components, imposing restraints or adaptations in them. Key names in assemblage theory are Deleuze, Guattari, DeLanda and Latour.

Autopoiesis
Theory where living systems are 'self-producing' mechanisms which maintain their particular form despite material inflow and outflow, through self-regulation and self-reference. Proposed by Chilean scientists Humberto Maturana (1928-) and Francisco Varela (1946-2001) in the early 1970s, it combines the concepts of homeostasis and systems thinking.

Constructivism
Constructivism is a theory describing how learning happens and suggests that learners construct knowledge out of their experiences. Normally attributed to philosopher and natural scientist Jean Piaget (1896-1980), constructivism is frequently associated with pedagogic approaches that promote learning by doing. Key names in constructivism are Vygotsky, Bruner, Varela, Maturana and von Glasersfeld.

Cybernetics
The general theory of self-regulating systems and control systems. The term was introduced in this sense by Norbert Wiener in 1947. A “first-order” cyberneticist, will study a system as if it were a passive, objectively given “thing”, that can be freely observed, manipulated, and taken apart. A “second-order” cyberneticist working with an organism or social system, on the other hand, recognizes that system as an agent in its own right, interacting with another agent, the observer. The observer too is a cybernetic system, trying to construct a model of another cybernetic system.

Digital
New media are also often referred to as digital media by virtue of the fact that media which previously existed in discrete analogue forms (i.e. the newspaper, the film, the radio transmission) now converge into the unifying form of digital data. They can now all be either converted to or generated as a series of numbers which are handled by computers in a binary system.

Digital platform
A digitized platform for media that allows real-time and/or delayed delivery of video, audio and/or data to multiple networks such as cable, satellite, digital terrestrial broadcasting and broadband. Delivery can be made via a variety of devices possibly including mobile phones, set-top boxes and computers.

Feed-back loop
A closed transmission path or loop that includes an active transducer and consists of a forward path, a feedback path, and one or more mixing points arranged to maintain a prescribed relationship between the loop input signal and the loop output signal.

Feed-back (negative)
Negative feedback loops stabilize the system with its current trajectory. They reduce deviation between goal and performance, re-establishing the status quo and aim for equilibrium.

Feed-back (positive)
Positive feedback loops reinforce, or amplify, deviations each change adding to the next. Producing both novelty and instability they can generate runaway growth or collapse unless stabilized anew with more inclusive negative feedback. Positive feedback can conduce to modify the goals of a given system.

Hyperlink (or link)
A highlighted word, phrase or image in the display of a computer document which, when chosen, connects the user to another part of the same document or to different documents (text, image, audio, video or animation). In electronic documents, these cross references can be followed by a mouse click, and the target of the hyperlink may be on a physical distant computer connected by a network or the Internet.

Human Computer Interaction
Human Computer Interaction (HCI) is the study of how people use computer hardware and software, and the application of that knowledge to the design and development process in order to make computers easier to use.

Interface
A computer's user interface is a combination of hardware and software that shapes the interaction between the computer and its human user. The most common hardware components of the interface on computers today are the screen, the keyboard, and the mouse. The Graphic User Interface (GUI) uses icons and graphics on the computer screen to communicate the options of a program to the user.

Open Source
Open Source refers to the software-industry tradition of developing and sharing source code and standards, and of encouraging collaborative development. Often aligned with hacker culture, open source culture has contributed to many important developments in Internet infrastructure, software language and software creation.

Realism
A theory that entities of a certain category exist mind-independently, i.e. independently of what we believe or feel about them. Realists accept the idea that we live in a world that exists independently of us and our thoughts, and hence that some facts may be beyond our grasp, in the sense that we are unable to confirm that they obtain.

Software
1. A set of computer programs, procedures, and associated documentation concerned with the operation of a data processing system; i.e. compilers, library routines, manuals, and circuit diagrams.
2. Information (generally copyrightable) that may provide instructions for computers; data for documentation; and voice, video, and music for entertainment or education.

Source code
Source code is human-readable instructions written in a programming language, such as C++. Before an application can be run on a computer, the source code is converted to machine-readable binary codes by an application called a compiler.

Structural coupling
Structural coupling happens 'whenever there is a history of recurrent interactions leading to the structural congruence between two, or more, systems' (Maturana and Varela, 1987:75). Structural coupling then, is the process through which structurally-determined transformations in each of two or more systemic unities induces (for each) a trajectory or reciprocal change.

Systems theory
Systems theory was proposed in the 19540's by biologist Ludwig von Bertalanffy (*General System Theory*, 1968) and furthered by Ross Ashby (*Introduction to Cybernetics*, 1956). Von Bertalanffy emphasized that real systems are open to, and interact with, their environments, and that they can acquire qualitatively new properties through emergence, resulting in continual evolution. Rather than reducing an entity (i.e. the human body) to the properties of its parts or elements (i.e. organs or cells), systems theory focuses on the arrangement of, and relations between, the parts which connect them into a whole.

Introduction

This research germinated in my mind fifteen years ago when, working as a television producer, I began to question how the digitalisation of the whole production process (from filming to editing) and of content distribution (first via digital cable and satellite, and later via the Internet) would affect the form, and the effect of documentary making. What will the documentary of the future be like? How will digital interactive and networked media enforce new logics of representation of reality? These questions have evolved since formally starting this research at Goldsmiths, but my fundamental interest in the documentary form as a way of relating to reality and of creating models of subjectivity[1] has not changed.

What is interesting about the documentary form is not so much its attempt to portray a reality of interest to the filmmaker, but that the way the filmmaker chooses to interact with reality, to mediate it through shooting, editing and showing it, is indicative of new ways of thinking about reality, and therefore of forging it. In other words documentary doesn't say much about what reality *is* but it says a lot about *how we do relate to* reality and how we construct our knowledge, and our beliefs, around it. If we accept the hypothesis that media is not neutral, as it affords[2] a certain type of informational organisation that shapes the final artefact and places its users in specific roles, then entering into a digital networked society must be seen as having cultural, political and aesthetic consequences. This research focuses on the changes that can be observed in a specific type of digital artefact: the interactive documentary.

With the availability of high speed broadband in private households, collaborative Web 2.0 and the high penetration of mobile digital devices over the last ten years,

[1] I refer here to models of "subjective consciousness" in Chalmers terms (1996) as ways to create a consciousness of the self: how are 'qualia, subjective experiences, first-person phenomena' (Searle 1997:99) experienced and created through the relation human-interactive documentary? In chapter three this concept will be expanded to Guattari's 'complexes of subjectivation' (1995:7).

[2] The word "affordance" was originally invented by psychologist J. J. Gibson (1977, 1979) to refer to the actionable properties between the world and an actor (a person or animal). 'A path *affords* pedestrian locomotion' (Gibson, 1979:36), 'a fire affords warmth' (ibidem). To Gibson, affordances are relationships, some of which are perceivable while some others are not - or we just do not know about them. When I say that a media affords certain types of relationship I mean that each media permits, allows and accommodates different information structures: a video tape affords sequential shots while a DVD can afford non sequential random viewing.

the Internet has shifted from being a secondary delivery platform for video producers to being a fundamental production platform for any documentary maker. Smart phones allow us to access content on the move but also to send photos, videos and texts from wherever we are. The Web is no longer populated by static pages designed by specialists: it hosts highly networked and dynamic content that can be produced from everywhere by not particularly digitally skilled individuals. In such networked cultural and technological context people interested in factual narrative are rightly considering digital media as an alternative medium to video and film – which have been the traditional media of documentary makers so far. But a platform that affords interactivity pushes authors to experiment with interaction, changing the form of the documentary from linear to non-linear, from authored to collaborative and from video-based to multi-media based. The result of those experiments is what, in this research, will be referred to as interactive documentaries[3].

If interactive documentaries can be traced back to the early 1980s it is only in the last ten years, since non-professional content has started populating Web 2.0 blogs and dynamic websites, that they have been asserting themselves as a radical new form. Recent projects such as *Gaza Sderot: Life in Spite of Everything* (2008), *Journey to the End of Coal* (2009), *The Virtual Revolution* (2009), *Prison Valley* (2010), *Life in a Day* (2010) and *Beyond 9/11* (2011), indicate that large communication corporations such as the BBC, Arte TV, Le Monde and Time Magazine, are moving into the field, investing into interactive platforms and moving the genre to another economic scale.

As in any emerging field there is a lack of definitions and taxonomies that confuses our understanding of the genre which makes the mapping of the field particularly difficult. Terminologies such as new media documentaries, web-docs, docu-games, cross-platform docs, trans-media docs, alternate realities docs, web-native docs and interactive documentaries are all used without clear understanding of their differences. But a closer look at the form shows that all these types of interactive documentaries are substantially different because they all vary in degrees of interactions, in levels of participation, in logics of interaction and in degrees of narrative control by the author.

[3] A digital interactive documentary not only uses a digital support (that could be anything from digital video to mobile phones or the Web…) but it also demands some embodied interactivity from the user-participant (in other words a participation that is more than the mental act of interpretation).

It is in this fuzzy and constantly evolving context that this research seeks to map the forms of emerging interactive documentaries, so as to propose a definition and a taxonomy of the genre. It aims to analyse the specificities of each type of interactive documentary and, finally, to investigate the influences that interactive documentaries might have in forging our understanding of our world, and our role within it.

This research argues that interactive documentaries should be looked at as *relational* entities, rather than static ones. The term "relational" implies that these are dynamic systems formed by heterogeneous entities (humans, machines, protocols, technology, society, culture) where all the components are interdependent. For example, their interactive nature demands an active participation of the user who, de facto, becomes a *doer*, rather than a *viewer*. The user needs to act on, interact with, the interactive documentary for it to materialize itself into a new screen. The user is therefore not *external* but rather *internal*, "part of" the system. The user and the interactive documentary are linked and interdependent: a string of feed-back loops (action/reaction) ties them together and transforms them both. It is not one object that needs to be studied, but a cloud of possibilities that depends on the possible relations between several dynamic systems.

This view of relationality inscribes itself in the current debates around body and affect that have emerged in cultural and social studies in the last ten years (Blackman, 2008; Brennan, 2004; Clough, 2008; DeLanda, 1992; Massumi, 2002; Lash, 2006; Latour, 2002, 2004; Parisi, 2004). The importance of *affect* - understood as 'pre-individual bodily forces augmenting or diminishing a body's capacity to act' (Clough, 2008:1) – is that it puts the emphasis on the concept of *becoming*, rather than *being*, and on *process*, rather than *structure*. Individuals, in such paradigm, are not separate from their environment, not in control of it either, but constantly affected by it and 'put into motion by other entities, human or non-humans' (Latour, 2004:205). It is in this context that this research concentrates on a particular encounter between entities: the user and the interactive documentary. The aim is not to focus on the effect on the user but if anything to diminish the importance of the user when studying interactive documentaries.

It is argued that a relational approach allows us to concentrate on the temporary links created between a user and a digital artefact. This approach puts the emphasis on their *becoming one*, and on the *process* that makes such encounter possible. By

doing so, we can discover the complexity, the transformational power and the political impact of interactive documentaries. This would not be possible using more traditional methodologies of analysis, such as film studies[4] or Human Computer Interaction[5], as they tend to have a dualistic approach film-audience, and digital artefact-user. It also needs to be noted that film studies tend to focus on image composition and temporal montage, none of which are representative of the non-linear, multi-window nature of interactive artefacts (as argued by Lev Manovich in *The Language of New Media*, 2001[6]). Furthermore, as we will see in chapter five, certain types of interactive documentaries use little, sometimes no, moving image at all. Human Computer Interaction, on the other hand, has a rather user-centric[7] approach to interactive artefacts; it focuses on the action/reaction dynamics between the user and the computer, and tends to disregard the potential effects of such exchange onto a larger system. In this research the interactive documentary will not be seen as a static finite product, but rather as an *eco-system*[8] (Fuller, 2005; Guattari, 2000; Hayles, 1999; Gibson, 1979; McLuhan, 1968) where one change in the system has repercussions on all its components.

By looking at interactivity[9] as transformative, responsive and adaptive the interactive documentary will be re-defined as a *Living Documentary*. This is a living entity - living as conceived by Maturana and Varela in Second Order Cybernetics where a

[4] I refer here to the traditional ways of analysing film language as expressed, among others, by Bordwell and Thompson (2004), Grant and Wharton (2005), Nelmes (2003) and Arijon (1976); where the means by which film meaning is created include 'dialogue and voiceover, but really focuses on cinematic aspects such as cinematography, *mise en scène*, editing, sound and special effects, as well as genre, narrative, representation and the star system' (italics in original, Grant and Wharton 2005:8).

[5] Human Computer Interaction (HCI) is 'a field which studies and attempts to improve the interface between computers and users' (Lister et al. 2003:41). A history of different HCI approaches will be given in chapter one.

[6] In *The Language of New Media*, Manovich foresees the re-emergence of 'spatial montage' (where different images, of different sizes, appear at the same time on the screen) through the passage from linear film to interactive media. Spatial montage, he says, 'represents an alternative to traditional cinematic temporal montage, replacing traditional sequential mode with a spatial one' (2001:322).

[7] See *The Three Paradigms of HCI* (2007), by Harrison, Tatar and Sengers.

[8] In *Media Ecologies*, Fuller reminds us that ecologists focus on 'dynamic systems in which any one part is always multiply connected, acting by virtue of those connections, and always variable, such that it can be regarded as a pattern rather than simply as an object' (2005:4). Although several understanding of the word "ecology" are possible, and Fuller provides an exhaustive summary in his book, it is to this idea of 'massive and dynamic interrelation of processes and objects, beings and things, patterns and matter' (2005:2) that we will refer in this thesis.

[9] As we will see in chapter two, the traditional Human Computer Interaction understanding of "interactivity" is of series of on/off loops between the human and the machine. This two-way approach will be argued against in this research.

living *autopoietic*[10] organism is self-organized, autonomous and in constant relation (structural coupling) with its environment (Maturana and Varela, 1980). Through this new approach it will be possible to question the levels of *liveness* of Living Documentaries (their aptitude to self-organize, to adapt to their environment[11] and to change it). It will be argued that Living Documentaries are not the simple evolution of linear documentaries through digital technology[12]. Digitality is fundamental, but not enough. Their liveness and adaptivity is what permits them to change; it gives them a transformational power, which will be the focus of the second part of this thesis.

Transformation will be understood as the power of the interactive documentary to change itself, but also to change what is part of its ecosystem: the user, the author and the interface being just some of the components of such system. If one accepts the constructivist idea that we constantly re-adjust our understanding of the world through our actions in it, then the interactive documentary becomes a mediated world where we constantly test options, experiment and reposition ourselves. This could be true of our relation to any digital interactive artefact, whether a 3D game or an interactive art project, but the particularity of the interactive documentary is that it relates to reality. While the users are selecting options, sending videos or navigating in a virtual world, they are conscious that this is not a fictional space: they are exploring, changing, participating in a particular vision of reality. If in the last century, as we will see in chapter one, documentary's purpose has shifted from representing to negotiating reality (Bruzzi, 2000; Nichols, 2001; Winston, 1995),

[10] First formulated by biologists Maturana and Varela in 1980 autopoiesis has become a key concept of Second Order Cybernetics by defining the living organism as self-organized, autonomous and in constant relation (structural coupling) with its environment. Abstracting "life" from the usual characteristics of "birth", "death" and "mode of reproduction" was perceived as liberating and revolutionary in the cultural context of the early 1980's. This maybe explains why autopoiesis was rapidly extrapolated from the biological context and used in philosophy (Deleuze, Guattari), social sciences (Luhmann), psychology (Bruner) and cognitive science (Thompson, Rosch, Clark and Noe). It is argued, in this research, that autopoiesis is particularly useful for the analysis of digital interactive documentaries because it defines interaction as a set of relationships between the organism and its environment that defines, and shapes, both of them.

[11] Where "environment" is not understood in a dualist way, as what surrounds us, but rather in a systemic way, as what shapes us, and is shaped by us. This vision is in line with psychologist Gibson view of the human as in a relation of interdependence with his environment (1979). Following a similar approach, biologists Maturana and Varela, referred to the example of the foot and the shoe: those two entities are not to be seen as separated, since the 'recurrent interactions' (1987:75) between the two bond them in a structural coupling where they are both shapers and shaped.

[12] Critiques done to the digital as a political system (Deleuze, 1995; Galloway, 2004; Massumi, 2007b) will not be taken into consideration in this research as it goes beyond its scope. This thesis wants to limit itself to the creation of conceptual tools to understand new media forms such as the interactive documentaries.

interactive documentary is going one step further: the act of negotiation now implies direct participation by the user to the construction of the world that is portrayed. Reality can now be co-created, but who are the participators? What power do they have? And which visions of the world are emerging from such co-creation?

In order to answer those questions this thesis will proceed through a series of steps.

Chapter one will propose a definition of the word "interactive documentary" and attempt a taxonomy of the genre. For this we will need to question if current definitions of linear documentaries are applicable to digital interactive documentaries. Differences and similarities between linear and interactive documentaries will be highlighted. *Modes of interaction*, will be proposed as a way to distinguish between interactive documentaries. Modes of interaction are ways of conceiving the relation between users and digital content; they give different levels of agency[13] to the user and they set the parameters of the interaction between the users and the interactive artefact. Four types of interactive documentary modes will be proposed: *hypertext*, *conversational*, *experiential* and *participatory*. Examples of each of those modes will be discussed specifically in the thesis.

Chapter two will use Cybernetic concepts of feed-back loops, autopoiesis, embodied action and structural coupling to visualize interactive documentaries as systems that are in constant relationships with other systems, and that are formed by/through those relationships. Deleuze, Guattari and DeLanda's use of autopoiesis and assemblages[14] will be essential to look at interactive documentaries as *Living Documentaries,* living forms with levels of interactivity and levels of autopoiesis.

[13] Agency is a philosophical concept that describes the capacity of an agent to act in a world. The term is used here in its interactive design sense, as a description of what a user can do when interacting with a specific digital artifact.

[14] The different definitions of the term assemblage, by philosophers Deleuze and DeLanda will be seen in chapter two. The theory of assemblages considers that entities on all scales (from sub-individual to transnational) are best analyzed through their components (themselves assemblages). The relationship between an assemblage and its components is complex and non-linear: assemblages are formed and affected by heterogeneous populations of lower-level assemblages, but may also act back upon these components, imposing restraints or adaptations in them.

In chapter three, four and five case studies of each interactive mode described in chapter one will be examined. Assemblage theory will be used to highlight the domains that form them and to question what stabilises and destabilises them. Then, through the lenses of autopoiesis and structural coupling, the levels of autopoietic behaviour of each case study will be analysed. From this standpoint it will be questioned how open such systems/artefacts are to organizational change, how their identity might change through interaction with their environment and, finally, how such systems might stop functioning/existing – in other words how they might die. The selected case studies will be: the *[LoveStoryProject]*, by Florian Thalhofer (2002-2007) for the hypertext mode, *Rider Spoke*, by Blast Theory (2007) for the experiential mode and *Global Lives*, by David Harris (2009-ongoing), for the participatory mode. The only mode that will not be analysed through a case study is the conversational one. Although this research wants to propose a new methodology for analysing interactive documentaries, it does not try to be exhaustive - the task would simply be too vast. I have therefore decided to leave out the conversational mode in the hope of continuing such research as a post-doc.

The conclusion of this research will seek to illustrate how each interactive mode carries with it an inherent vision of the world, and our role within it. It is hoped that this contribution will not only be relevant to the academic understanding of interactive documentaries but that it will also help future creators when conceiving their digital products. The message, and the effect, of their work will depend on the topic they portray, the media they use and the look and feel of their interactive artefact, as well as the interactive modes that they decide to use. As with any relational object, the interactive documentary has a political power that should not be underestimated by its creators, interactors and participants. This thesis proposes new lenses to see the transformative power of interactive documentaries. They will be useful to those for whom documenting reality is a dynamic process, not a straight line. This is only a starting point: in a fluid environment, lenses will have to be constantly re-adjusted to keep some focus on the ever-changing shape of what we perceive as our standing ground.

The difficulty in exploring a field in constant evolution is in resisting the temptation to simplify it too much and propose a methodology that is coherent, yet flexible

enough to be case specific. My personal solution has been to propose a general methodology, a way of looking at interactive documentaries, that only acquires density and depth once applied to specific cases studies. In order to choose the most significant examples, and to test my own ideas while they were developing, I created my own website in March 2009. In www.interactivedocumentary.net I have created an archive of existing interactive documentary examples, I have documented my own process of going through a PhD and, most importantly, I have invited others to participate – and therefore to change/push my own thinking. In a certain way my website has been my own interactive documentary, a place where my voice has reached others, but also where unforeseeable relations, technical constraints and people's suggestions have transformed my own thinking, my language and my beliefs. The professional credibility acquired through my website has also allowed me to co-convene i-Docs 2011[15], the first European symposium totally dedicated to the field of interactive documentary, and its subsequent i-Docs 2012. I see in my website the demonstration that an interactive documentary is not just a virtual space - a new living species confined to the cyber world - but rather a relational object that keeps changing and that affects its digital, and non-digital, components in very tangible ways.

[15] i-Docs 2011 was convened by myself and Judith Aston on behalf of the Digital Cultures Research Centre, University of the West of England, Bristol. All the abstracts of the conference can be found at www.i-docs.org.

Chapter 1- The interactive documentary as an emergent form

The first part of this chapter gives an overview of the main approaches that have been followed so far to define documentary genre. The aim is not to give a full account of documentary's historical evolution, nor to cover the literature on how to make documentaries, but to pin down what makes a film, or a video, a documentary rather than another narrative form. The second part of the chapter moves from linear media (such as film and video) to digital interactive media (such as the Internet, tablet computers and mobile phones) and argues that it is counter-productive to frame digital interactive documentaries as a continuation of linear documentaries. Although they both attempt to document reality[1], they use completely different approaches in doing so and they therefore produce different artefacts. The differences and communalities between the two forms will be explored. Finally, the third part of this chapter will propose a definition and a taxonomy of interactive documentaries based on the idea of *modes of interaction*.

Defining the linear documentary

> Even in its infancy, when films were composed of a single shot and lasted less than a minute, cinema was divided in two camps: those who looked to the real world for their subject matter, and those who filmed performances. (Cousins and Macdonald, 1998:4)

[1] In this thesis "reality" will be understood as any mediated material (where mediation might happen through our senses, our mind or media) that we make sense of – or make sense through - to establish a meaningful relation with what surrounds us. "Reality", and "the real", will be used following the documentary understanding of such terms, meaning "not-fictional" or "factual". In effect documentary making has been defined from the start in opposition to fictional cinema. John Grieson, the filmmaker at the heart of the British Documentary movement of the 1930's, and to whom the first use of the word "documentary" is associated, specifically states that "the materials and the stories taken from the raw can be finer (more real in the philosophical sense) than the acted article" (as quoted in Macdonald and Cousins 1998:97). The "real" is therefore seen as the "non-acted", as the raw material that surrounds us. With time, as Brian Winston pointed out in *Claiming the Real* (1995), an apparent contradiction appeared at the heart of documentary making: the presentation of "factual" material is mediated by a subject (the creative filmmaker) and by media (film/video) so the documentary becomes the filmmaker's point of view on reality rather than the spectator's one.

Defining the documentary genre is not as simple as it might seem. If from the beginning of cinema making there has been a division between those attempting to record reality (facts) and those aiming at inventing reality (fiction), this distinction has never been crystal clear. In his article *From DV Realism to a Universal Recording Machine* (2004), media critic Lev Manovich traces back the distinction between factual and fictional narrative to the opposite positions that pioneers filmmakers like the Lumière brothers and George Melies took at the very start of the history of film making. The Lumière brothers experimented through filming their own workers leaving the factory (*Workers Leaving the Lumière Factory*, 1895) or the entrance of a train in the La Ciotat station (*Arrival of a Train at a Station*, 1895) while George Méliès, a former magician, experimented with special effects and fictional narratives (his most famous film is A Trip to the Moon -*Le voyage dans la Lune,* 1902). But, as film critic Thomas Elsaesser has demonstrated, the Lumière brothers had planned, scripted and rehearsed several of the events that they wanted to film, blurring the notion between factual and fictional narrative and therefore making it difficult to define documentary genre in simple opposition to fictional film[2].

This been said, even if documentary cannot be just defined as not-fictional, the expectation of the viewers is generally that 'that which occurred in front of the camera remains identical to the actual event we could have witnessed in the historical world' (Nichols, 1991:25). For documentary theorist Bill Nichols, documentary practice in one way or the other poses the question "this is true, isn't it?", a question that sets a particular dynamic between the filmmaker and her audience, a dynamic of trust, and therefore of authorial responsibility. Stating that documentary is not easier to define than "love" or "culture", since it is always relational, comparative and culture specific, Nichols proposes to give a multiple definition of what is for him a 'fuzzy concept' (2001:21) that is prone to contestation and change. Nichols strategy is to define documentary from three different points of view, conscious that 'each starting point leads to a different yet not contradictory

[2] Film maker and critique John Grierson, in the 30's, had defined documentary as 'creative treatment of actuality' (as cited by Hardy, 1946: 11) highlighting the possibility of staging and re-enacting filmed scenes. As documentary style evolved towards a less interventionist style – see the Direct Cinema in the 60's, and the Digital Video Realism of the 80's - the idea of staging reality became less popular. The boundaries between fictional and factual film have always been elastic enough to accommodate a culture specific notion of "what is to be considered real". Documentary is therefore a time and culture specific concept.

definition' (1991:12). The three points of view he proposes are: the filmmaker, the text and the viewer. Nichol's approach is of interest to this research because it is systemic: more than one point of view is considered in order to define a complex artefact.

If one starts from the filmmaker's point of view, two are the possible angles to define what a documentary is: it can be seen as an artefact produced by someone that considers himself a documentary filmmaker; and it can be seen in terms of the power that the filmmaker exercises while filming. A common way of defining documentary is to see documentary filmmakers exercising less control over their subjects than their fictional counterparts (Bordwell, 1985; Gomery, 1986). The position and power of the filmmaker is here the focus of the definition. While this definition has the advantage of highlighting the role and influence of the filmmaker in the creation of her artefact it has the disadvantage of being quite vague regarding what is meant by "control" (control of actors? of events? of framing? of what might happen? of distribution? of sponsorship?).

Another possibility is to define documentary as a film genre, in other words as a type of 'text' (Nichols, 1991:18). But the problem with this approach is that it implies assessing which characteristics films must have in order to be part of this genre. Now, as Bill Nichols points out, this would mean over-simplifying the different styles that documentary had during the past century and cutting out any attempt to do things differently. This definition starts from a structuralist paradigm and does not accommodate evolution well.

Finally, another option is to define documentary from the point of view of the users. One fundamental expectation of documentary is 'that its sounds and images bear an indexical relation to the historical world' (Nichols, 1991:27). The documentary is often perceived as realist, the assumption of the viewer is that things have happened in front of the camera as they would have happened if the camera had not been there. Whether this assumption is true or false is irrelevant here, what counts is the expectation of the viewer. The viewer in a way has to believe the facts at the base of the documentary. Film critique Brian Winston has dedicated several books, the most famous being *Claiming the Real,* to argue that documentary does not tie with realism but with subjectivity, putting the emphasis on the act of interpretation. This point of view has the advantage of showing the possible contrasting expectations between the filmmaker and the viewer, putting them both at the same level of importance.

Nichols also offers another possible approach to define what a documentary might be. This time, rather than concentrate on its players he concentrates on its "modes". The *modes of representation* are 'basic ways of organizing texts in relation to certain recurrent features or conventions' (1991:32). A mode conveys a perspective on reality, because the logic that a documentary follows, in its structure, says a lot, as we have seen in the introduction of this research, about the positioning that the filmmaker and its audience takes while trying to mediate reality. The emphasis here is on *how* the documentary made, what does its structure mean and how does it position the different players involved. *How* does it create meaning rather than *what* meaning does it want to convey. I see the modes of representation as a meta-logic, as a frame that roughly summarizes the different positions that the filmmaker, the filmed subjects and the viewers have taken so far[3]. In *Representing Reality* (1991) Nichols describes four main modes of representation that he then upgrades to six in *Introduction to Documentary* (2001). Those six modes are:

- *The Poetic Mode* - reassembling fragments of the world, a transformation of historical material into a more abstract, lyrical form, usually associated with 1920s and modernist ideas. Examples, chosen by Nichols, include: Luis Bunuel' s *Un Chien Andalou* (1928) and *L'Age d'Or* (1930), Oscar Fischinger's *Composition in Blue* (1935).
- *The Expository Mode* - arose from the dissatisfaction with the entertainment figures of fiction film, social issues assembled into an argumentative frame, mediated by a voice-of-God narration, often associated with the 1920s-1930s. Examples, chosen by Nichols, include: Leni Riefenstahl's *Triumph of the Will* (1935), Robert Hughes's *The Shock of the New* (1980).
- *The Observational Mode* - introduced a mobile camera and avoided the moralizing tone of the expository documentary as technology advanced by the 1960s and cameras became smaller and lighter, able to document life in a less intrusive manner, there is less control required over lighting, leaving the

[3] Nichols schematization has been highly criticized by Stella Bruzzi for being too rigid and historically incorrect (2000), but Nichols does state more than once that his modes can be co-existent (1991:32) and that they constitute a 'loose framework' (2001:99) that is only roughly chronological. The relevance of those modes is for me that they constitute an attempt to see patterns and conventions that a film might adopt. It is exactly those conventions that are revealing about the negotiation that a society has with reality. The fact that those conventions are not rigid, that they can be mixed or changed does not, from my point of view, contradict Nichol's thinking.

social actors free to act and the documentarists free to record without interacting with each other. Examples, chosen by Nichols, include: Friedrick Wiseman's *High School* (1968), Pennebaker and Leacock's *Primary* (1960).

- *The Participatory Mode* - the encounter between film-maker and subject is recorded, as the film-maker actively engages with the situation they are documenting, asking questions of their subjects, sharing experiences with them, and stressing the actual lived encounter between the filmmaker and the subject or the environment. Examples, chosen by Nichols, include: Dziga Vertov's *The Man with a Movie Camera* (1929), Jean Rouch's *Chronicle of a Summer* (1960).
- *The Reflexive Mode* - demonstrates consciousness of the process of reading documentary, and engages actively with the issues of realism and representation, acknowledging the presence of the viewer. Corresponds to critical theory of the 1980s. Examples, chosen by Nichols, include: Chris Marker's *Sans Soleil* (1983), Trinh T. Minh-ha's *Surname Viet Given Name Nam* (1989).
- *The Performative Mode* - acknowledges the emotional and subjective aspects of documentary, and presents ideas as part of a context, having different meanings for different people, often autobiographical in nature. Examples, chosen by Nichols, include: Michael Moore's *Roger and Me* (1989), Jennie Livingston's *Paris is Burning* (1990).

At the core of Nichols vision is the belief that the word "documentary" must itself be constructed in much the same manner as the world we know and share. 'Documentary film practice is the site of contestation and change' (1991:12). Change, for Nichols, is possible because of the encounter between the filmmaker, the text, and the viewer. It is not a finite product that represents reality but rather a process of documentation[4] that allows the contestation and change of reality. A

[4] It has been argued that a documentary cannot be seen as a finished artifact. In his article *Documentary in a Post-Documentary Culture? A Note on Forms and their Functions* communication theorist John Cormer sustains that a documentary is not a word that simply describes an end product, but a set of *relations*: 'Specific production practices, forms and functions all work to 'hold together' (or not) the documentary identity at different times and places. Briefly put, they concern how a film or program was made (according to what recipes, methods and ethics), how it looks and sounds, and what job it was designed to do…' (Cormer, 2007:2). This thesis agrees with this point of view but claims that those relations are of a different nature in interactive documentaries because they demand real-time actions from the users/viewers.

similar systemic approach will be used when analysing the digital interactive documentary in the second part of this chapter.

Defining the digital interactive documentary

If documentary is a fuzzy concept, digital interactive documentary is a concept yet to be clearly defined. What is implicit in its terminology is that an interactive documentary needs to use a digital support, and be interactive. A linear documentary that has been shot with digital technology, and that is distributed on the Web, is a digital documentary but not an interactive one. In other words, in an interactive documentary the user[5] needs to have an agency[6]: she must to be able to physically "do something" with/to the artefact. As a consequence, the act of interpretation will not be considered as "interaction" in this research, as it does not engender a feed-back from the digital system itself.

One of the contributions to knowledge that this research wants to propose is a definition, and taxonomy, of interactive documentaries that follows a platform and content agnostic approach. This sub-chapter will therefore first map early attempts in defining interactive documentaries and then propose its own definition.

When I started this research in 2007 very little had been written about interactive documentary. Other than Glorianna Davenport, who started experimenting with multimedia film narratives in the mid 80's[7] at MIT - and in 1995 coined the concept of 'evolving documentary' (1995:1), very little had been formalized in the academic field. One reason for such lack of literature might have to do with the fact that most new media artists do not consider themselves documentary makers, and therefore they call their work anything but interactive documentaries. In 2002 artist and

[5] In this research the "user" will also be refered to as an "interactor" or an "actant".

[6] Agency has been defined by Janet H. Murray as 'the satisfying power to take meaningful action and see the results of our decisions and choices' (1997:126). Although the term is usually used in game design to indicate the arrow of options given by a digital game to its player, Murray's definition is chosen here because it puts the emphasis on the notion of "power". Agency will be used in this thesis to question the power relationships that are afforded by interactive documentaries.

[7] In one of her first papers, *Interactive Multimedia in a Single Screen Display*, Davenport searches for 'time-linked relationships between movie segments, graphics and text; and the set of user tools which allow viewers to edit video footage, create graphic models and link their notations to the master database' (1988). Although her research was initially focusing on the crossovers between the film form and what was then called multimedia, she later moved closer to factual narrative while leading MIT's Interactive Cinema Group.

academic Mitchell Whitelaw was noticing the rise of the terminology "interactive documentary". For him the step from watching digital video on a desktop to being able to upload it onto the Web (plus the burgeoning rise of household broadband) was the cause of such new 'swell of interest' (2002:1). Whitelaw also noticed how such form, still largely video based, constituted a problem for the established documentary world. 'New media forms pose a fundamental challenge to the principle of narrative coherence, which is at the core of traditional documentary. If we explode and open the structure, how can we be sure that the story is being conveyed?' (2002:1). Effectively, by giving agency to the user, the interactive documentary proposes a non-linear type of narration that is in conflict with the traditional voice of the author, expressed in linear narrative. This leads to the fact that many documentary makers and critics question whether an interactive factual narrative is to be considered a documentary – for the simple fact that it often lacks a strong narrative voice.

The first writers that have tried to define the term have treated digital interactive documentary as an evolution of linear documentary into the digital realm. This means that they have assumed that an interactive documentary had to be mainly video based and that interactivity was just a way to navigate through its visual content:

- Carolyn Handler Miller, who wrote *Digital Storytelling* in 2004, saw the interactive documentary as a type of non-fiction interactive movie. 'The viewers' she says 'can be given the opportunity of choosing what material to see and in what order. They might also get to choose among several audio tracks' (2004:345).
- For media theorist Katherine Goodnow from the University of Bergen, also writing in 2004, interactive documentaries comes from the early experiments in interactive film, where physical activity[8], rather than cognitive activity, is used to browse through live action footage (video or film).
- Xavier Berenguer, from Barcelona's Pompeu Fabra University, saw the interactive documentary as a type of interactive narrative that emerged on the

[8] Goodnow makes a distinction between cognitive function (the act of understanding and interpreting) and physical activity - where the 'audience must do something in order to fulfill the desire to know how the story will end, or to explore alternative storylines' (2004:2).

> side of hypertexts and games in the '80s. For him, when narrative became interactive, through the use of new media, it spread into three main directions: interactive narrative, interactive documentary and games (Berenguer, 2007).

By tying linear and interactive documentaries together through a technological historical approach the risk is to expect them to be somehow similar, or at least in a clear evolutive relation. Artist and new media theorist Mitchell Whitelaw takes another approach, for him 'new media doco [documentaries] need not to replay the conventions of traditional, linear documentary storytelling; it offers its own ways of playing with reality' (2002:3). Five years later, in their paper *From Michael Moore to JFK Relaoded: Towards a working Model of Interactive Documentary* Galloway et al. reinforce the same notion: 'the interactive documentary should not be viewed as a replacement for documentary but as a valid, additional creative form for allowing people to explore and contribute to our understanding of the world' (2007:21). Effectively this is what is happening: Web documentaries do speak about, and with the language of, our new digital networked world.

The evolution of the interactive documentary form in the last five years, its spreading towards mobile, social and networked media and especially the sudden rise of successful projects such as *We Feel Fine* (2005), *Gaza Sderot: Life in Spite of Everything* (2008), *Life in a Day* (2010), *Prison Valley* (2010) and *Highrise* (2009-ongoing) have proven Whitelaw and Galloway et al. to be right: interactive documentary uses digital media to create artefacts that would have simply been impossible, even conceptually, ten years ago. They are just "another thing". If an interest in factual and social debate is in line with linear documentaries' goals, the ways in which reality is mediated through interactive dynamics change both the positioning of the actors that are involved and the effects of such negotiation.

We have witnessed the last five years an exponential growth in the production of interactive documentaries that has itself generated a growing interest in the field from both the academic and the media world[9]. As with any snowball effect it is at

[9] In the last five years most international documentary and film festivals have created a section dedicated to their interactive off springs (IDFA Lab at the International Documentary Festival of Amsterdam, The Crossover Summit at Sheffield Doc/Fest, New Frontier at the Sundance Film Festival – to state only a few) but it is only in 2011 that an event solely dedicated to the interactive documentary form has been created: i-Docs, held in Bristol, U.K. Interestingly, in both i-Docs 2011

times difficult see what is emerging from an apparently chaotic movement. The following is an attempt to map the main changes:

1. A few definitions of interactive documentary have been proposed:
    a. For Galloway et al. 'any documentary that uses interactivity as a core part of its delivery mechanism' can be called an interactive documentary' (2007:12). While the openness to any interactive digital platform makes the definition scalable to any future platforms that interactive documentaries might use, the limitation of such view is that placing interactivity only in the "delivery" encounter with the user might be restrictive. Since I would argue that interactivity changes *all* the stages of the creation/production/life of the interactive documentary it would prove more useful to consider interactivity as a "condition of being" rather than just a "delivery mechanism".
    b. Interactive documentary specialist Gifreu defines the interactive documentary as 'interac-tive online/offline applications, carried out with the intention to represent reality with their own mechanisms, which we will call navigation and interaction modalities, depending on the degree of participation under consideration' (2011a:358). Gifreu mainly concentrates on screen-based digital documentaries (offline and online) so he does not include locative documentaries (that use mobile phones and GPS devices), performances or exhibitions or docu-games (computer games that use factual content). I am searching for a definition that would include all of the above in the family of interactive documentaries.
    c. Media lecturer Kate Nash talks about webdocumentaries and defines them as 'a body of documentary work distributed by the Internet that is both multimedia and interactive' (2011:2). Here again the emphasis on the Web as unique platform for the form and as a distributing channel only is restrictive for the type of interactive documentaries that will be considered in this research.

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and i-Docs 2012's programs one can notice a "taxonomies" panel. This clearly indicates that the need for a clear terminology is very much seen as a priority in the field by both academics and practitioners.

d. New media filmmaker Martin Percy speaks about 'Internet native movies' (2011:1) in his online manisfesto[10]. For him 'a new sort of online film is emerging. It doesn't just use the Web as a method of distribution. Instead, it tries to combine the emotional connection of live action film with the flexibility of the web. You couldn't show these films on a regular TV without losing something essential. You could say, therefore, that these films are "native" to the Internet. You could even call them "Internet Native Films" ' (2011:1). Although Percy has mainly produced interactive documentaries[11] in his career, his manifesto focuses on the larger family of interactive video narratives made for the Web (factual and fictional). I shall retain from his definition the idea that an interactive documentary needs to be "native" to its digital platform.

While some people have felt the need to define the term interactive documentary, several recent academic papers (Hudson, 2008; Ursu et al., 2009; Almeida and Alvelos, 2010; Dovey and Rose, forthcoming) have used the wording "interactive documentary" without defining it. This probably indicates that the term is gradually being accepted as an established media term.

2. Most of the authors who have proposed a definition of interactive documentaries have also tried to develop their own taxonomy to make justice to the emergence of different logics, or genre, within the form itself.
    a. Galloway and al. proposed four possible interactive documentary models: the *Passive Adaptive*, where the documentary (through mechanical observation) displays different content based on how the viewer is reacting to material; the *Active Adaptive*, where the viewer is in control of the documentary's progression; the *Immersive* model, where the user is exploring the documentary through a virtual world or augmented reality; and, lastly, the *Expansive Model*, where

[10] See http://internetnativemanifesto.posterous.com/ [Accessed 20 January 2012].
[11] See the *Tate Modern - the BT Series* (2006), *A Conversation with Sir Ian McKellen* (2006) and *The Bali Temple Explorer* (2011).

viewers are actually able to contribute to the documentary itself, making it an organic, ever growing creation. The particularity of Galloway's classification is that she places the user at the centre of her analysis, making it a very user-centric taxonomy.

b. Gifreu follows Bill Nichols's three fold definition of documentary and adapts it to analyze interactive documentaries. By doing so he highlights the characteristics of Web documentaries from the viewpoint of the author (broadcaster), the point of view of the discourse or narrative (text) and from the point of view of the interactor (reception) (2011a).

c. Nash identifies three main interactive structures in webdocumentaries: the narrative, categorical and collaborative structures (2011). The 'narrative webdoc' (2011:9) tends to propose a dominant narrative, even if the user is free to navigate through it with different logics. The 'categorical webdoc' (2011:10) has a structure that does not push a chronological narrative, but rather proposes a collection of simultaneous entry points or equivalent micro-narratives[12]. Finally the 'collaborative webdoc' counts on the user to produce content and interact within some sort of social network. Nash's taxonomy is inspirational for this research because it looks at the interactive structure of the documentary, but it only includes Web documentaries, leaving all other digital platforms excluded from the genre.

This overview of existing definitions, and taxonomies, for interactive documentaries, shows that they tend to be platform specific (Almeida and Alvelos, Gifreu, Percy, Nash) or user-centric (Handler Miller, Galloway). But this thesis wants to include in the notion of interactive documentaries all the factual narratives that can be done with the existing, and possibly future, digital interactive platforms. A platform-agnostic definition is therefore needed. In this research any project that starts with an

[12] In chapter five I have referred to what I see more as an aesthetic than a category as the 'mosaic aesthetic'. Effectively this type of interactive documentary has an interface with multiple entry points that does not want to prioritise a single point of view.

intention to document the "real"[13], and that does so by using digital interactive technology, will be considered an interactive documentary[14]. This definition puts the emphasis on the *interactive-native* nature of the artefact, and on the *documentation intentionality* of the author.

Comparing linear and interactive documentaries

The fundamental difference between a linear and an interactive documentary is not the passage from analogue to digital technology but the passage from linear to interactive narrative. Both linear and interactive documentaries try to create a dialogue with reality, but the media they use afford the creation of different products. If linear documentary demands a cognitive participation from its viewers (the act of interpretation), the interactive documentary adds the demand of physical participation (decisions that translate into a physical act such as clicking, moving, speaking, commenting etc…). If linear documentary is video, or film, based, interactive documentary can use any existing media. If linear documentaries are viewed through a screen interactive documentaries can be viewed, or explored, on the move in physical or augmented space (using mobile platforms such as mobile phones, portable computers or tablets). And if linear documentary depends of the decisions of its filmmaker (both while filming and editing), interactive documentary does not necessarily have a clear demarcation between those two roles[15] - as we will see in the final part of this chapter and through the analysis of case studies in chapters three, four and five.

Since documentary theory gives particular relevance to the *aims* of the documentary form, one would have to check if those are the same in linear and interactive documentary. Linear documentary aims at representing 'issues and aspects, qualities

[13] Where, as seen before "reality" is understood as any mediated material (where mediation might happen through our senses, our mind or our media) that we make sense of – or make sense through- to establish a meaningful relation with what surrounds us.

[14] Outside of this research I normally refer to interactive documentaries as "i-docs". This is also the name that I proposed when creating the i-Docs symposium, in 2011. I do not claim this terminology as being mine, although I had never heard it before, and I have noticed that in the past two years it has been adopted by some (Holubowicz, 2011; Danylkiw, 2011). In this research I will always use "interactive documentary" instead of "i-docs" as it is a more established term.

[15] The launch in 2007 of the online Disposable Film Festival (DFF) is a good indication of how new media (webcams, point and shoot digital cameras, cell phones, screen capture software, and one time use digital video cameras) and the rise of online distribution (YouTube, Google, MySpace, etc.) have allowed any digital user to become a potential producer of short documentaries. For more see http://www.disposablefilmfest.com/about/.

and problems found in the historical world' (Nichols, 2001:42), it attempts to capture truth (Winston, 1995), it does so with an authoritative voice, as a 'discourse of sobriety' (Nichols, 1991:2) using facts, but especially montage, to present an argument, a point of view, to an audience. Since in this research the objective existence of facts and truth will be challenged, it would make no sense to retain them as "indispensable" while studying the interactive documentary form. On the contrary, it will be claimed that the interactive documentary should not to be defined by its aims, or authorial voice, but by the relations it forms (see chapter two). Most of the time such relations are not even trying to represent a given reality, but rather to shape it through the interactions that they afford. The methodology that will be developed in chapter two to analyse, what I will call a *Living Documentary,* is directly linked to Nichols systemic view of linear documentaries. The topic a documentary overtly discusses makes us understand the intentionality of the author, but it is by looking at the *mode of representation* used in the documentary that we can learn about our social, political and cultural belief systems.

A quick look to the titles of some classic books on the art of documentary shows the emphasis on the notion of "reality": *Claiming The Real* (Brian Winston), *Representing Reality* (Bill Nichols Documentary), *Imagining Reality* (Macdonald and Cousins), *Documentary – The Margins of Reality* (Paul Ward)… one might want to ask to which "reality" are they referring to. Is this "reality" a given or is it somehow created through the act of documenting it? Bill Nichols claims that documentary cannot be seen as 'reproduction of reality but as a representation of the world we occupy' (2001:20) and that it 'frames and organize (reality) into a text' (1991:8). In *Claiming the Real* journalist and documentary theorist Brian Winston underlines the fact that the presentation of factual material is mediated by a subject (the filmmaker) and by a media (film, video, new media) and this mediation is not neutral. Documentary theorist Stella Bruzzi has given particular emphasis to the role of the filmmaker stating that documentaries are 'performative acts whose truth comes into being only at the moment of filming' (2000:4). For her the documentary is 'a negotiation between reality on one hand and image, interpretation and bias on the other' (2000:4).

The aim of documentary has therefore evolved over time from representing reality, to order reality, to finally becoming a negotiation with reality[16]. But what does *negotiation* really mean? Bruzzi sees the filmmaker as invading a space and influencing it – leaving behind the illusion of an objective film that inspired the Direct Cinema of the '60s and some DV Realism of the '90s. For Bruzzi, the disruption of reality by the performance of the filmmaker is what makes the meaning and the value of the documentary. She sees the documentary as 'a dialectical conjunction of a real space and the filmmakers that invade it' (2000:125). The emphasis on the role of the filmmaker is both the strength and the weakness of Bruzzi's argument. If on one hand her definition highlights the active role that both the filmmakers and the subjects that are filmed have in producing "a reality" - that is then mediated and given meaning by the filmmaker (in the process of editing) - on the other hand it puts the filmmaker, and her performative act, at the centre of the creation of meaning. Taking as an example the accidental 22 seconds 8-mm footage shot by amateur Abraham Zapruder of the assassination of President Kennedy[17], Bruzzi stresses that 'although an image can document, it has no meaning without the context that is the film' (2000:9). Although the Zapruder film is factually accurate it 'cannot reveal the motive or cause for the actions it shows' (Bruzzi, 2000:21). For the footage to acquire sense it needs to be part of a structure, a logic, an access point to reality that is the documentary itself. This makes the filmmaker - a performer while filming and a decision-maker while editing - solely responsible for the creation of meaning.

In participatory interactive documentaries, where User Generated Content can be used to populate a Web documentary, this responsibility is diluted, and sometimes impossible to trace back. When the author is responsible for an interactive structure (for example a website) but not for the content that populates it, one might ask what happens to the intentionality of the author, and who is to be held responsible for the message of the documentary. The notion of the filmmaker as the main performer,

[16] This evolution does not have to be seen as strictly chronological, but as movements and tendencies that can co-habit in the same documentary.

[17] Zapruder was a women's clothes manufacturer that intended to shoot a family record of President's Kennedy visit to Dallas the 22nd of November 1963. As it happened Zapruder's 8-mm footage ended up being the a very important record of the President assassination.

and therefore as responsible for the creation of meaning, is challenged by a media that affords online collaboration, semantic video[18] and movement in real space.

As Dovey and Rose point out in their article *We're Happy and We Know it: Documentary:Data:Montage* (2012) linear documentary used to delegate to the author two of its intrinsic aims: the presence of a point of view (Nichols calls it an 'act of persuasion', 1991:103) and the ability to present an objective context for such argument to make sense. Apart from the fact that objectivity and point of view are by definition contradicting each-other[19], such goal of persuasion might not be present at all in online interactive documentaries such as *We Feel Fine* (Harris, 2005) or the *Are You Happy?* project (Rose, 2012) - where live data is pulled out of the Internet and assembled together through an interface. In such "web-native" documentaries (Dovey and Rose, 2012) the author allows the juxtaposition of other's people points of view into a unique interface, and therefore assumes a position of facilitator – rather than evangelist. The fact that the construction of meaning might now pass through both video/media content (often user generated) and the interactive interface itself will be discussed in detail in chapter five. At this point it is enough to notice that if persuasion and construction of context might not be one of the fundamental aims of interactive documentaries, mediating society, and 'letting one part of society seeing another' (Dovey and Rose, 2012), is more than ever at the core of social media documentaries. While Corner's (1999) three traditional functions of documentary – democratic civics (informing the audience and engaging people as active citizens), journalistic enquiry (objective research methodology) and radical interrogation (questioning evidence and proposing a point of view) – are still possible in interactive documentary, one has to acknowledge that interactive media affords new aims for the documentation of reality. What might be left in common through the passage from linear to interactive documentary could just be wish to establish a dialogue/link/mediation between different parts of society on a specific factual topic. 'It is obvious', writes interactive documentary specialist Arnau Gifreu,

[18] The recent emergence of authoring tools such as Zeega (2012), 3WDOC (2011) and 3WDOC (2011) is propagating the use of HTML5 in video content on the Web. Through HTML5 a video placed on a webpage can be linked to any other static and live web content (in the same way that a hyperlink can link text to any other media content on the web). This phenomenon has been called "semantic video", or "hypervideo" and "web-native" video (Dovey and Rose, 2012).

[19] As Nichols sais 'once we embark on the presentation of an argument, we step beyond evidence and the factual to the construction of meaning…Once an argument begins to take shape, that fact begins to fit into a system, of signification, a web of meanings…' (1991:117).

'that all interactive documentaries aim to document and represent reality in a particular way and there is therefore an apparent documentary purpose. In this respect, we are faced with the same interests as in traditional audiovisual documentaries' (Gifreu, 2011b:2). And yet, the "apparent documentary purpose" might be different in interactive and linear documentaries. If linear narratives are suitable to propose an authorial point of view, interactive narratives afford the creation of debate – with all the issues that this might pose from an ethical point of view.

The difference between a linear and an interactive documentary is therefore not the passage from analogue film to digital video. A linear documentary that is distributed through the Internet is digital, but if it is not interactive it does not affords new types of construction of reality. The introduction of interactivity, through new media, brings with it new dynamics which, with time, creates new possible aims and therefore new epistemologies. For example, as we will see in chapter four, mobile media allows the user to retrieve and create content while moving in physical space and therefore an interactive documentary that uses such platform will act as a layer between the user and its physical context. Whether voluntarily or not, such interactive artefact will change the perception that the user has of the space/world around her. The shifting of perception and understanding of the space around us can be seen as a new aim of locative documentaries. Similarly, as we will see in chapter five, one of the affordances of the Internet - to allow users to generate part, or all, the content of a Web documentary - makes possible the emergence of a new aim for this type of interactive documentary: not just informing the audience but changing users into co-producers and creating a dynamic of co-responsibility and polyphony towards the reality that is portrayed by the documentary. It will be argued then that if establishing a dialogue between different parts of society on a specific factual topic remains a common aim of both interactive and linear documentaries, each form of documentary affords other sub-aims that are specific to the media and aesthetics that it uses.

Interestingly, while documentary *aims* are very presents in the relevant literature, the *effects* that documentaries might have do not seem to be considered as defining grounds by most documentary theorists. But from a cultural studies point of view it is impossible to isolate documentary as an art form without including it in a wider

context of cultural relations. I shall argue that the documentary constructs reality while negotiating it, and this is what makes it particularly interesting.

> Documentary, like other discourses of the real, retains a vestigial responsibility to describe and interpret the world of collective experience, a responsibility that is no small matter at all. But even more, it joins these other discourses (of law, family, education, economics, politics, state and nation) in the actual *construction* of social reality. (Bill Nichols,1991:10)

In other words the construction of social reality is also done through media. In our case it is the positioning that the media makes possible for the individual that "places" such person in a set of possibilities. This is where there is a big difference between linear and interactive documentaries. Interactive documentaries are relational artefacts that allow direct engagement with the reality that they portray - and that therefore create new epistemologies. By placing the *viewer* in a position of *doer* they afford specific roles that are both symptomatic and formative of social and political power relations. What type of *doer* the user becomes depends on the interactivity afforded by the artefact. The modes of interaction that will be explored next will help us distinguish between types of *doers* in interactive documentaries.

Interactive documentary: the field so far

This section does not want to be an exhaustive history of the interactive documentary genre, but just propose some milestones and turning points in the evolution of a genre that has partially followed the technical evolution of digital media, and its understanding of interactivity. A limited number of examples will be selected to illustrate how the evolution of the so called new media[20] has created new opportunities to document reality. Nichols has proposed *modes of representation*[21] to generalize the different logics that filmmakers have adopted in linear documentary

[20] New Media captures both the development of unique forms of digital media, and the remaking of more traditional media forms to adopt and adapt to the new media technologies' (Flew, 2002:11).

[21] As seen before, "modes of representation" are 'basic ways of organizing texts in relation to certain recurrent features or conventions' (Nichols, 1991:32). A mode evolves into another one when 'the conventional nature of a mode of representation becomes increasingly apparent: an awareness of norms and conventions to which a given text adheres begin to frost the window onto reality. The time for a new mode is then at hand' (Nichols, 1991:32). The shift between a mode and another one is by no way linear and simply progressive. Modes do co-exist and are mutually influencing each other. They are indicators of trends and a way to encapsulate cultural shifts.

making. Similarly, I propose to use *modes of interaction* to illustrate the ways interactive authors have positioned their users, and used technology, to portray the reality they were interested in - and create a specific type of action via the interactive documentary.

To trace a short history of digital interactive documentaries (it barely started thirty years ago) it would be tempting to adopt a strictly chronological approach, and to assimilate different styles to an evolution of pre-existing genres (educational, simulation, games etc…) topics of interest (travel, history, diary, nature etc…) or by evolution of the support (video disk, floppy disk, CD-ROM, Internet, DVD, mobile devices etc…). But those approaches do not investigate the set of relations that are the focus of this research. In order to analyse the different logics of negotiation with reality I propose to draw a parallel between the way interactivity has been understood, and used, in existing interactive documentaries, and the relations that it has enforced between the author, the user and the media.

Interactivity, in human-machine interaction, has a history which fits within both a functional and ideological context. If, from a functional point of view, interactivity can be defined as 'the user's ability to directly intervene in and change the images and texts that they access' (Lister et al, 2003:20) the meaning and consequences of such ability are still very much an open discussion (Brand, 1988; Aarseth, 1997; Jensen, 1999; Engelbart, 1999; Mayer, 1999; Shultz, 2000; Harrison, Sengers and Tatar, 2007; Dubberly, Haque and Pangaro, 2009). Reading interactivity as control, freedom of choice, face-to-face communication or systemic, influences the types of artefacts that can be produced through it. For this reason, this research will start by differentiating types of interactive documentaries by looking at the logic of interactivity that they endorse. Later, in chapter two, a more systemic understanding of interactivity will be proposed. But for now, let us stay within a classic Human Computer Interaction terminology to trace back how the advent of personal computers has inspired several modes of interaction between the computer and the user. Since each mode corresponds to different visions of what the human-computer communication/interaction should be, it allocates different levels of agency to the user. The evolution of human-computer interaction (from the point and click made possible by Engelbart's first computer mouse to the social interaction made possible by Tim O'Relly's vision of a networked Web 2.0) has created new logics of representation of reality, and new possibilities of action within the digital artefact,

and the reality portrayed. An analysis of interactive documentaries must therefore start from the understanding of the modes of interactions that are used in each artefact.

The conversational mode

In the late 70's the invention of the optical videodisc allowed to store and access up to half an hour of analogue video via a computer. Nicholas Negroponte's Media Lab decided to experiment with the creation of a virtual travelling space, called the *Aspen Movie Map*[22]. The aim was to let a user drive through the entire city of Aspen, Colorado[23]. In the "media room" a user could control speed and direction of travel into a city by interacting with a screen interface. Andy Lippmann was the director of the project. He was inspired by a vision of interactivity as a 'mutual and simultaneous activity, on the part of both participants, usually working towards some goal, but not necessarily' (Brand, 1988:46). For him, to be interesting, a conversation needs to be interruptable (interruptibility[24]), an unanswerable request should lead into a smooth transition (graceful degradation), sentences – or moves - should be decided on the fly (limited look-ahead), sentences needs to feel unpredictable (no-default) and the conversation needs to feel potentially endless (impression of infinite database). In a conversation between Brand and Lippmann, published in *The Media Lab,* Lippmann clearly explains that his inspirational model for Human Computer Interaction (HCI) is the one of a conversation, as opposed of a lecture. To be successful, and fulfilling for the participator, a conversation must be an exchange rather than a passive listening. Obviously technology was not able to create a really open computational space (this is still a challenge nowadays) but the inspirational model for the interaction between *Aspen Movie Map* and the user is the

[22] The final project took shape at the Media Lab, 'where the material was organized, edited, and mastered onto a videodisc. The controlling software and interface design, with the additional help of ArcMac graduate students including Steve Yelick, Paul Heckbert, and Ken Carson, turned the mass of material into a singular virtual travel experience. By Summer, 1979, the *Aspen Movie Map* was ready for its first demo, and it caught the attention of the press'.
From http://www.naimark.net/writing/aspen.html. Retrieved 10.05.08.

[23] In *The Media Lab* Steward Brand explains that the viewer could 'drive at will down any street, turning any direction at any corner, and the appropriate film shown. You can shift the scene any time to any season, look forward, to the rear, or either side, and stop and explore any building'. (Brand, 1988:49)

[24] Interruptability, graceful degradation, limited look-ahead, no default pathway and impression of an infinite database are the five corollaries, or properties, that Lippman sees as essential to attain true interactivity.

one of a conversation: the user is to feel free to improvise movement at any moment and the software has to smoothly respond to such decisions. The positioning of the user here is as equal to the machine and the assumption is that an artefact done through such logic of interaction can simulate reality.

Fig. 1 - The *Aspen Movie Map* (http://www.naimark.net/writing/aspen.html)

The *Aspen Movie Map* was not openly called an interactive documentary. It was seen as a virtual interactive drive in the city, but to me it shows the initial hopes on a new relation to digital content: the real, the city of Aspen, is not explained to the user, but it is simulated for/by the user. The idea of documentation passes from *explanation* of reality to *simulation* of reality (using images). If objectivity (the reproduction of the physical streets of Aspen through video) is somehow implicit, the voice of the human author is replaced by a machinic author: the algorithm that actualizes the decisions of the user. When the user turns left the city seamlessly recomposes itself through its computational activity. In this type of project it is not the point of view of the author that is put forward but the interpretation and use of the re-created space/reality by the interactor. The user needs to feel free to drive and to explore without crashing the system nor feeling its limitations. The authors, in this case MIT's Architecture Machine Group, uses the computer as a simulator of reality, they choose what can be 'made with this reality' (turn, stop, touch the wall etc…) but they do not intervene during the narrative that is lived and created in real time by both the machine and the user. Although the video disk has limited storage capacities, the interaction is meant to feel limitless, the user should not feel trapped

in a pre-defined and authored system. The role of the author is in a way to trick the user using real-time interaction and strong agency. But from the artefact point of view the inter-action with the user does not generate new content, it just actualizes a new screen with a new street. Is agency, the empowerment of the user, enough to mask what effectively is a closed database?

The conversational mode is inspired by a type of interactivity that wants to reproduce the interaction between two human beings, or a human in a physical space. Lippmann's vision of a limitless conversation with the computer is still technically impossible, but its simulation is becoming more and more convincing as speed and memory of computer expand. Computational theorist Michael Murtaugh sees 'liveness' as a recurrent theme in computational interactivity 'interactivity always involves simultaneity, as computations occurs iteratively through feedback to a shared and changing environment' (2008:146). Today we can see the Holy Grail of liveness as more present then ever: the use of Artificial Intelligence in games and the extension of the environment of interaction from the screen to physical space in locative and Augmented Reality projects are two different ways of re-placing interaction into a complex world (artificial in the case of 3D environments, or physical in the case of locative projects). The assumption here is that to interact with a world is like conversing with it: it is open to endless possibilities (impression of infinite database) and both the user and the environment react in real time to each other (limited look-ahead). Whether such interaction creates transformation of the artefact itself is still to be debated and, as we will see, will vary on a case per case scenario. When I browse through *Google Street View*[25] (that I would see as a modern version of the *Aspen Movie Map*) I have a feeling of freedom of exploration (which is fake, as my movements are limited to the streets that have been documented[26]) and my actions only materialize the next screen (which could be seen as a low level of transformation). But when I play *Sim City*[27] my acts feeds into an algorithm that in return generates a city that was inexistent before my inter-action with the system - so it could be argued that the transformation of the artefact is of a higher level. This

[25] See http://www.google.co.uk/help/maps/streetview/. Retrieved 01.01.12.

[26] Not all the streets are documented by Google Street. Private passages, or minor routes, are often ignored. Furthermore the exploration stops at the street level, as it is impossible to open a door and continue the exploration inside the private house.

[27] *Sim City* was created by Will Wright in 1989. As we will see in the next paragraph it is the first type of game that uses Artificial intelligence (AI) to "respond" to the user's actions.

is the effect of a generative feed-back made possible by the use of artificial intelligence.

Artificial intelligence was first applied to games, but it quickly got incorporated into fictional interactive narratives[28]. More recently hybrid forms of docu-games have emerged, often called Games for Change or Serious Games, blurring the boundaries between entertainment and documentary[29]. The first interactive narrative that was clearly recognized as more than a game was *Sim City*. Will Wright's simulation game (first released in 1989) creates narrative on the fly generating different events depending on the decisions that the user has taken when building the virtual city. Ten years later, with *The Sims*, the same logic is applied to characters of a family, bringing game and narrative closer than ever. *The Sims* (2000) is a 'dynamic simulation running in real time' where the 'social universe no longer needs to be sampled but can be modelled as one continuum' (Manovich, 2004:4). Simulation means that the computer renders, and constructs, a world, and a story, in real time making narratives 'bottom up and emergent' (Aarseth 2004:42) rather than 'top-down and preplanned' (ibidem). This leads Dovey and Kennedy to draw an interesting distinction between "simulation" and "representation" where the first is a 'useful way of modelling complex environments with multiple interconnected causalities' (2006:11) while the latter emphasizes a linear chain of signification (where a signifier relates to a signified in the real world), hence a somehow simplified world. In this reading simulation could be seen as somehow "richer" than representation because it affords multiplicity of scenarios and makes the player become other while rehearsing her position in the world.

In *The Sims* the player creates a family and then sees them evolving. The Sims, the virtual characters, are 'alive' even when the player is not active[30]. Manovich sees in *The Sims* a 'wonderful opportunity to address one of the key roles of art – a

[28] See Façade (2005), by Mateas and Stern, for an example of AI applied to a purely narrative story (with no game logic). To download Façade go to www.interactivestory.net.

[29] In 2002 the movement "Serious Games" was launched after the video game *Americas Army* proved that games could go beyond their entertainment value. Americas Army is a simulation game that gives a thorough inside to what it means to be a soldier in the USA army. To play the game online go to http://www.americasarmy.com. Another movement," Games for Change" (G4C), tried to promote the use of digital games to involve young audiences in social issues (raising issues of race, environment, human rights, health etc…) For more information see http://www.gamesforchange.org/. Recent examples might be *Participatory Chinatown* (2011), and *One Ocean Interactive* (2011).

[30] In her article *Peeling the Onion: Levels of Interactivity in Digital Narratives*, Marie-Laure Ryan describes the Sims as 'perhaps the most powerful interactive narrative system in existence today' (2005:20). For her the game 'simulates the randomless of life rather than the teology of narrative' (2005:21).

representation of reality and the human subjective experience of it – in a new and fresh way' (Manovich, 2004:4). *The Sims* can be seen as an attempt to document possible realities, and to learn about the consequences of our acts. While the user is in a conversational relationship with *the Sims,* she interacts with lives that do not appear to be pre-determined - as each of her acts can create event modifications.

A conversational documentary does not need to be a game (inspired by facts rather than fiction), it is a digital artefact that simulates reality and that *can* have a game logic. It just happens that the majority of the examples to date belong to the category normally called "games". For game theorists Salen and Zimmerman 'a game is a system where players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome' (as quoted in Szulborski, 2005:5). In the case of docu-games the "artificiality" is given by the fact that the rules and the settings have been authored by a game designer but the facts that are portrayed are rigorously documented and factual. The interactivity embedded in a docu-game can be of many sorts: it could be a hyperlink logic (click on the right answer and move ahead in the story) a participatory logic (for example in the case of Massively Multiplayer Online Role-playing games) or an experiential logic (for example Alternate Reality games[31] mix online gaming and direct implication in the real word to create the narrative in real time). It is only when a factual game, or narrative, tries to simulate reality through a designed 3D world that I will consider it a conversational documentary.

In 2002 the use of artificial intelligence to build realistic worlds was applied to a game released on the Internet by the U.S military: *America's Army*. The intention was to 'provide civilians with the insight on Soldiering from the barracks to the battlefields'[32]. The game, says new media documentary maker Randy Horton, was 'conceived, produced and distributed entirely as a documentary project' (2008:5) and military personnel would test and give feed-back on the game to ensure the authenticity of the experience. This type of product positions the performativity of

[31] An Alternate Reality Game (ARG) is an interactive narrative that uses multiple platform to deliver a story that may be altered by participant's ideas or actions. The Internet is often used as main delivery platform but action also occurs through the real world where players receive phone calls, are demanded to find clues in real world locations or collaborate with each other to solve mysteries. The story unfolds in real time according to participants' responses. Subsequently, it is shaped by characters that are actively controlled by the game's designers, as opposed to being controlled by artificial intelligence as in a computer or console video game. In *This is not a Game* Dave Szulborski insists that the main characteristic of ARG is that it does not want to feel like a game, it should feel "real" and totally immersive to the player (2005).

[32] Promotional text on the website itself. See www.americasarmy.com.

the documentary filmmaker into the player and aims at creating real time experiences in digital worlds. One can question to which point a simulation is a type of documentation but the learning that follows the simulated experience is a more embodied encounter of U.S military life than the one gained by watching a documentary on the same subject. *America's Army* is often quoted as an example of docu-game because it is designed to gain experience and understand a reality that is normally inaccessible to us, military life[33].

More recently, Immersive Journalism expert Nonny de la Peña has used participative 3D world Second Life to reconstruct another place to which access is restricted: Guantanamo Bay. In *Gone Gitmo* (2007) de la Peña reconstructs the prison using documented material and invites the user to "experience" it. This strand of work has been labeled "Immersive Journalism" (de la Peña, Dominguez, Pryor). Immersive journalism, writes de la Peña et al., 'does not aim solely to represent "the facts" but rather the opportunity to experience "the facts"' (2010:301). Effectively immersion is used here as a tool to learn about life through first person experience, rather than to acquire knowledge through someone else's explanation of it. Even if the sense of presence and agency happens through the interface of an avatar that moves in a virtual space, the player still creates meaning while playing – a meaning, that is of 'different quality of the one generated through reading' (Dovey and Kennedy, 2006:101) and, by extension, to the one generated through watching a film.

The distinctions between immersion in a virtual 3D world and a physical one will be discussed in chapter four. Firstly I will argue that a digital 3D world is still a space controlled by its authors (in the sense that the rules are defined at its beginning) while the physical world has too many unknown variables to be predictable. With the emergence of participatory worlds such as Second Life (where many users participate in the creation of such digital world) a level of unpredictability is added, but it is still not equal to our physical world. Secondly I will argue that physical embodiment is completely different when in front of a screen then when moving through a physical space. This second distinction is becoming thinner with the recent use of Augmented and Virtual reality in real space. In her latest project, *Hunger in L.A.* (2012), de la Peña uses game-development tools, a body-tracking system, and a head-mounted goggle display, along with live audio she collected during a real

[33] The final aim is actually to recruit new soldiers. This is probably enough to make us question the nature of documentation about "real" soldier life provided in the game.

incident, to construct a fully immersive, simulated world where audience members can walk around, and interact with other characters in the scene. In this case physical embodiment is a physical experience where the body interacts with a reality that is virtual. *Hunger in L.A.* can be seen as a hybrid between a conversational and experiential logic of interactivity, as it combines a simulated world with physical movement in real space. *Hunger in L.A.* also has the particularity of documenting an event that has really happened (in opposition to *Gone Gitmo* or *America's Army* that simulate an existent world but do not document a precise event). Here we step from a logic of simulation to a logic of re-enactment.

There are other precedents of computer games that have also used artificial intelligence, archive material and statistical data to re-enact a situation that has really happened in the past. *JFK Reloaded* (2004) recreates the last few moments of Kennedy's life and challenges participants to help disprove any conspiracy theory by recreating the three shots that Lee Harvey Oswald made from the sixth floor of the Dallas book depository. It has taken a ten-man team seven months to research the information from the Warren Commission report and to accurately recreate the surroundings and events of 22nd November 1963. Players get the highest score if they perfectly re-enact the shooting sequence and place the three bullets at the exact trajectories described by the Warren commission. For new media documentary maker Randy Horton *JFK Reloaded* 'definitely has documentary qualities, and is intended to be much more than a simple game' as 'it attempts to reveal certain facts and empower a subjective truth within the player' (2008:10). For me what counts is not that it might be perceived as a game by its user, but that it uses documented facts to simulate a real event and put the interactor in a situation or re-enactment. Although the game might want the player to find out what really happened the documentary poses a much subtler question: "do you believe what you have been told was possible?". Here a conversational documentary uses interactivity to question one's belief system, rather than to communicate facts.

What I see as changing in all those examples of conversational documentaries is also the role of the user. While controlling speed and turns *(The Aspen Movie Map, Google Street View)* the user explores a digital space where here actions just trigger the next digital space on the screen. When deciding to kill, or not, people (*Americas's Army*) the user triggers the system to move the narrative to the next scripted stage. And when speaking to a character (*The Sims, Hunger in L.A.*) the user

allows the system to create a new narrative altogether - something that would not have existed if all those actants had not met, and interacted, through the digital artefact. So it is not the user that engender the narrative but the meeting of all the actants (user, author, technology, code, platform, interface etc…) of the artefact at a particular moment in time.

As we will see in chapter two, such relational object would need a new type of analysis, a methodology that can consider more than one variable at the same time in order to see the conjunct activity of all, or most, the interactors of the artefact. But for now a more traditional mode of analysis will be followed and I will concentrate on the role of the user – as she is normally seen as the one that provokes the feed-back loop between the interactive documentary and the machine. For this I will turn to one of the first theorists of digital non-linear narratives[34], Aarseth, as he was the first to concentrate on the possible transformational effects of the user's actions onto the artefact. For Aarseth when a user is faced with a non-linear narrative, her 'active feed-back functions' (1994:60) can be of four different types[35]:

- the explorative function (the user decides which path to take within pre-set options)
- the role-playing function (the user assumes strategic responsibility for a character in a world described by the text)
- the configurative function (the user can create or design part of the narrative)
- the poetic function (the user's actions, dialogue or design are aesthetically motivated)

I will take Aarseth's active feed-back functions and apply them to all the modes of interactive documentaries that I will analyse in this chapter. In this way, we will see how different kinds of interactivity transform the artefact to different degrees. In the *conversational mode* the user can have a role-playing function (driver in *Aspen*, soldier in *Americas Army*, killer in *JFK Reloaded*) or a configurative function (*The*

[34] Aarseth defines a non-linear text as 'a work that does not present its scriptons in one fixed sequence, whether temporal or spatial' (1994:57) - where a 'scripton' is 'an unbroken sequence of one or more basic elements of textuality' (1994:57) (for example a sentence in a text or a scene in a film).

[35] Aarseth also notes that the interpretative function (the possibility to subjectively interpret a text) is always present in both linear and non-linear texts. Interpretation is therefore not taken in consideration in his analysis.

Sims[36]*, Hunger in L.A.*). Although the user does explore the narrative this is not done through the choice between a clearly limited number of options (which will be the characteristic of the hypertext mode, that we will see next). In a conversational documentary choice appears to be limitless.

The author, on the other hand, has the role of 'world creator'. By simulating a world, with its own rules and "things that can be done", she also decides the type of agency that the user will have. When the world can also be generated by the users (configurative function), the author becomes a facilitator and an initiator. When the world is just to be explored and acted upon (role-playing function) the author is a narrator. The conversational mode is therefore placing a role-player (the user) in a digitally simulated, or re-enacted, reality and creates constant scenarios that appear to be limitless to the user. In such mode of interactive documentary, reality is not objective as it is composed by an apparently limitless number of scenarios.

The hitchhiking (or hypertext) mode

Ten years after the *Aspen Movie Map*, in 1989, the technology has advanced and the introduction of personal computer as objects of mass consumption makes a project as *Moss Landing* possible. *Moss Landing* is probably the first piece of digital production to be officially called *interactive documentary*. In 1989 Apple Multimedia Lab organized a one day shoot in the small American town *Moss Landing*. Several cameras simultaneously shot the life of people in *Moss Landing's* Harbour. The user was able to click on certain objects, or locations, of a "hyper picture postcard shot"[37] and this started a video that showed the point of view of the person, or position, that had been clicked on[38]. As explained by one of the filmmakers[39] the metaphor was the one of hitchhiking 'where one starts a ride with someone and continues with another one'.

[36] On the 10th of January 2008 *SimCity* 's source code was released under the free software General Public license. This adds one configurative level to the player as she can now go further than provoking an event by coding different rules to the game itself.

[37] As defined at minute 37 of *Moss Landing* archive video. MIT Lab, 1989.

[38] It was for example possible to click on a seagull and see the footage shot from a helicopter that simulated the view of the harbour from the bird's position. Grierson's definition of documentary as "creative treatment of actuality" becomes more relevant than ever.

[39] Minute 34 of *Moss Landing* archive video. MIT Lab, 1989. The name of the person interviewed is unknown.

Fig. 2 - *Moss Landing*'s hyper picture (Moss Landing's archive video, MIT Lab, 1989)

Fig. 3 - *Moss Landing*'s hypertexts (Moss Landing's archive video, MIT Lab, 1989)

Fig. 4 - *Moss Landing*'s video mosaic (Moss Landing's archive video, MIT Lab, 1989)

The logic of interaction that is behind *Moss Landing* goes back to what the computer does better: algorithmic[40] computation. Each link offered to the user goes to a specific destination, established by an algorithm. Computation is also behind the previously discussed conversational mode but there the computer had to simulate endless possibilities (even if in reality they are a finite number) while in the

[40] An algorithm is a 'systematic procedure that produces –in a finite number of steps – the answer to a question or the solution to a problem' (Eberbach, Goldin and Wegner, 2004:159).

hitchhiking mode the point to point nature of computation is transparent: each click of the user jumps to a predetermined location. Each hypertext uses a hyperlink to jump to a new screen. This logic of interaction has its historic origin in the vision of the computer as a machine that answers to a precise question, like in the Turing Machine[41]. Although the Turing machine was a mathematical abstraction it has inspired the logic behind physical computers. In the 1960's Turing[42] machines were adopted as 'a complete model for algorithms and computation problem solving' (Eberbach, Goldin and Wegner, 2004:161). According to Eberbach, Goldin and Wegner, the computers inspired by the Turing machine have three main properties:

1. they model a *closed* computation (which means that all the inputs are given in advance, therefore it is not open to the outside world)
2. their resources (time of computation and memory storage) are *finite*
3. their behaviour is *fixed* (each computation starts in an identical initial configuration)

A close look at *Moss Landings* finds a database of video material which is *closed* (pre-set by the author), links that are algorithmically defined to jump from one video to another one (videos that are limited in number and duration by the *fixed* resource that is the computer memory) and a starting point for the user that is *fixed* (the "hyper picture postcard shot"). In this algorithmic logic of computing interaction there is no space for the unexpected, and no opening to what is external to the system. The effect of the human-computer interaction is transformative of the artefact only to the point that it is through the link that the interactive documentary can materialize its next screen, or form. One could even question who the interactor is in this case. If the user clicks, the machine computes. As we will see in chapter three, while analyzing the *[LoveStoryProject]* (2002-2007) as a main case study of the hypertext mode, elements of randomness can be coded into the linking

[41] Although the Turing machine was a mathematical abstraction it has inspired the logic behind physical computers.

[42] Alan Turing was an English mathematician that proved that a machine (later called the Turing machine) could perform any conceivable mathematical problem if it was represented as an algorithm. This logic of computation, an algorithmic one, has forged what the computer is nowadays. Computer theorists Eberbach, Goldin and Wegner highlight in their article *Touring's ideas and models of computations* that although Turing concentrated his efforts and research on the algorithmic machine he also envisaged other options: the automatic machine, the choice machine and the oracle machine.

algorithm. At this point the choice that the user makes while clicking onto a hypertext needs the machine to create a new passage into the interactive narrative of the documentary. The machine can therefore be seen as the principal actant into the transformation of the artefact, where the user is just a trigger.

Most interactive documentaries stored on CD-ROM and DVDs[43] are based on the hitchhiking model, which I will more frequently refer to as a hypertext[44] model. Hypertexts were originally text based, but their logic got applied to video and to pictures. *Moss Landing* is an early example of 'multi-media hypertext' designed to jump[45] between different media modalities (from text to video, from photo to map, from video to video etc…) within a narrative frame.

In *Moss Landing* interactivity is not conceived as a conversation anymore, its fluidity has been lost, it has become an exploration through pre-established routes. The reality that can be expressed with this logic is browsable but pre-determined. The author can retain a fair control on the narrative that she wants to communicate and the level of control will depend on the extent of the branching structure that holds the different pieces of the story. As Murtaugh notices 'the popularity of the Web and hypertext has bound the idea of interaction to branching link structures' (2008:143). By clicking on a word, by moving a mouse, by selecting within a menu the user navigates between a number of pre-set options. The environment is not unpredictable anymore, it is just explorable. The logic is the one of conscious choice. The author creates scenarios, the software links assets of a database and the user chooses routes.

What type of negotiation with reality does the hitchhiking mode propose? Reality is not anymore a co-creation that happens through mutual conversation between the user and the author, via the media, but a set of possibilities where the user is a guest rather than a participator. Although the user is described as "active" by most

[43] I would tend to put in this mode a very varied array of interactive documentaries. From artistic projects such as CD-ROM *Immemory* (1997) of Chris Marker to more educational DVDs such as *Bleeding Through Layers of Los Angeles, 1920-1986* (2003) by Norman Klein and the Labyrinth Project. Although those projects are very different in terms of design style and depth of video storage, they both mediate a fragmented reality (Chris Marker's memories and Los Angeles evolution in time) putting the user in the role of an explorer that browse through hyperlinks.

[44] Hypertext fiction entered the narrative arena in the 1980's. A series of texts were linked via hyperlinks using a software called Storyspace. The reader could then navigate the networked texts (called Lexias) by clicking on hyperlinks (what has now become the standard blue text that symbolised that a word is an active link). Classic hypertexts examples are Michael Joyce's *Afternoon* and Stuart Multhrop's *Victory Garden*.

[45] For new media theorist Aarseth the main feature of hypertext is discontinuity, 'the jump, the sudden displacement of the user's position in the text' (1994:60).

multimedia hypertexts authors (Simones, Rothuizen, Klein, Thalhofer et al.) one might question what "activity" means for them. Followers of Michel de Certeau's *Practice of Everyday Life* will see in our daily choices an act of subjectivation and freedom but I am not sure that the choices given in a branching narrative have the same liberating effect that the one we do in a daily basis. To start with when one explores a hypertext narrative a large part of the motivation is the curiosity of seeing "what is this all about, and where is this leading to". The expectation is still to find what the author wanted to communicate. Is this enough to sustain a long engagement with the piece? The author's assumption is normally that the user's incentive is in the pleasure of exploration, the curiosity about different points of view, or simply the wish to learn[46]. But is this really enough? This answer seems to suit the authors more than the users themselves. Branching narratives are very effective in a learning environment (when the user has a strong motivation to browse content) but sometimes less effective in a narrative environment (where the user still expects narrative leadership from the author and does not find it in a logic of choices). There are exceptions. As we will see in chapter three, examples such as *Journey to the End of the Coal* (2008) do demonstrate that a strong narrative is possible with a branching narrative, but on condition that there are very few hyperlink choices, so that a rather linear control of the story is maintained. In *Journey to the End of the Coal* (2008) the user is given the role of a journalist trying to visit some coal mines in China. The very limited amount of options given to the user makes sure that all the important points of the story will be visited, but this low level of interactivity is counterbalanced by an interesting plot and very beautiful photography that maintain the user's interest. Conversational documentaries such as *Aspen*, give the illusion of offering limitless possibilities and demand high levels of agency (Crawford, 2003). However, in hypertext documentaries, what is arguably more essential is an interesting narrative or a well-defined topic for the user to explore. Because the user's personal interest in the topic is often what motivates her to explore, the sense

[46] In fictional narratives the incentive to keep clicking is even less clear than in factual narratives (where learning is a key motivator). The user operates on the level of narrative discourse (the order of the presentation of the events) as opposed to the level of the story (the plot itself) (Ryan, 2005:7). Is choosing what part of a story to explore first interesting enough? For ludologist Andrew Glassner, hypertext 'kills the narrative pleasure of novels and movies' (2004:469). The fluidity of the conversational mode is clearly more suitable to sustain the player's immersion, but I would argue that immersion is maybe not key in an interactive documentary – where the wish to learn might be enough to browse a whole hypertext narrative.

of freedom of action is less significant, and a low level of agency will still make for a satisfying experience. Indeed it may allow the user to concentrate on the content without being overly distracted by navigation

The hypertext mode has been very popular and a multitude of hypertext projects have been produced, varying platforms, vastness of content and structure of the branching narrative. They all attempt to explore ways to give some freedom of action to the user but 'the purpose of the user's agency is to progress along a fixed storyline, and the system remains in firm control of the narrative trajectory' (Ryan, 2005:10). *Moss Landing* (1989) proposes to explore the city harbour by choosing between the points of view of the people that live there, *Inmemory* (1997, CD-ROM) proposes to browse through author's Chris Marker's memories, *Bleeding Through: Layers of Los Angeles, 1920-1986* (2003, DVD-Rom) proposes to explore the evolution of Los Angeles through different layers of narrative. Extending the same exploratory logic to another new media, the Web, more hypertexts documentaries have been made in the last fifteen years: *Lewis and Clark Historic Trail* (2003, Web) allows the user to discover Meriwether Lewis and William Clark's expedition across the Louisiana Territory; *Last Tourist in Cairo* (2006, Web) offers maps, photos and drawings that Jan Rothuizen took while visiting the city, and *Forgotten Flags* (2007, Web and DVD) offers to travel through an unknown Germany by seeing interviews with the Germans that put their national flag out of their houses after the 2006 Football World Cup. The more recent *Journey to the End of the Coal* (2008), *Becoming Human* (2008), *Diamond Road Online* (2008), *The Big Issue: A Web Documentary on the Obesity Epidemic* (2009) and *Brèves de Trottoirs* (2010) are all Web documentaries that use sophisticated design and sleek interfaces to effectively do the same that CD-ROMs used to do: position the user inside a factual plot and ask her to make sense of it through hypertext navigation. Recently tablet platforms, especially the iPad, have offered a new support for hypertext documentaries. Mixing interactive publishing aesthetics with interactive narrative logics, electronic publications such as *The March of the Dinosaurs* (2011), *Skulls* (2011) or the *Solar System* (2010) are 'interactive story books'[47] that could well be seen as a new type of hypertext educational documentaries.

[47] This is how they are referred to on the App Store from where one can purchase them. See http://itunes.apple.com/us/app/march-of-the-dinosaurs/id462225645?mt=8&ign-mpt=uo%3D4. Accessed 9.02.12.

What all hyperlink projects have in common is the attempt to portray a factual reality through a searchable archive, or database. The condition is that the database is closed - not extendable by the author or by the user. The way to explore the database is the hypertext - a word, a drawing, a picture or a moving image- that does re-direct the user to the continuation of the reality that she is exploring. To what extent can we can we say that hypertext interactivity is transforming the artefact itself – when we know that all links are already pre-determined? Although hypertext documentaries have a low level of interactivity, they are still affected by the user: without her intervention they would not come alive at all. This transformation can also be seen from the point of view of the user. Brazilian filmmaker Nina Simoes calls her project *Rehearsing Reality* (2007) a 'docufragmentary', a database of video segments controlled by software that 'invites an active viewer to reflect and to create their own network of connections' (Simoes, 2007). Those connections, one could argue, affect both the user and the artefact. Also, as argued earlier, the machine can be seen as the main actant that makes the transformation into the next screen, or form, possible. A more complex answer to the question of transformative power of hypertext interactivity will be given in chapter three through the analysis of some examples.

For now, and to summarize in a few words the characteristics of hypertext documentaries I will turn once again to media theorist Aarseth's classification of feed-back active functions of the user. We can see then that in hitchhiking mode, the user can only explore. She can decide paths to be explored, but neither change nor add to the narrative. The role of the author then is to imagine branching narratives and rules of linking within a set database of text (lexias, videos, photos etc…). The author is not a facilitator as she is in the conversational mode, but a narrator that experiments with levels of choices within a controlled narrative framework. The hitchhiking mode gives no guarantee of arriving at destination, or of having an interesting journey, it assumes that the journey is the most important part of the experience, and that the user enjoys constructing her itinerary. How this defines the user's position in the world represented by the hypertext documentary will be addressed in depth in chapter three. Behind every type of interactivity lies an assumption of our power to intervene in/with what is around us. When the interactor can just explore, and choose within a closed number of pre-determined options, the assumption is that our world is pre-determined, although full of options, and that our power lies in choosing our path, not in creating or changing such world.

The participatory mode

Around 1995, MIT's Interactive Cinema Group, led by Glorianna Davenport, explored the possibilities of a digital 'Evolving Documentary'. For certain factual stories, write Davenport and Murtaugh, 'materials grow as the story evolves. For this reason the storage and descriptive architecture must be extensible' (1995: 6). With the Evolving Documentary, Davenport and Murtaugh wanted to push the logic of the database further, making it open to change. They designed a browser, ConText, that allowed new entries into the database. The authors annotated the 30 seconds video clips of the database with keywords. An Automatist Storytelling System - a sort of narrative engine - produced dynamic and responsive presentations from an extensible collection of keyword-annotated materials. Depending on the interests of the users, ConText played videos continuously, only stopping the video flow when the user wanted to intervene[48].

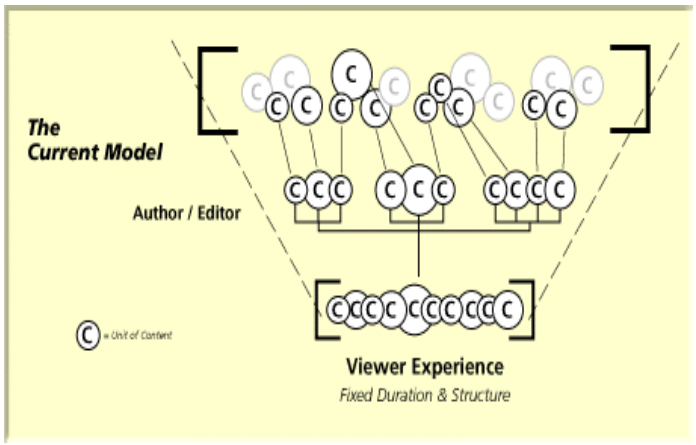

Fig. 5 - The hypertext model (Davenport and Murtaugh, 1995)

[48] In ConText, content is presented when the system detects idleness from the viewer. Thus, the story moves only when the viewer stops interacting. Content continues to be presented until the viewer stops it by clicking or moving the mouse over the interface to alter the story context.

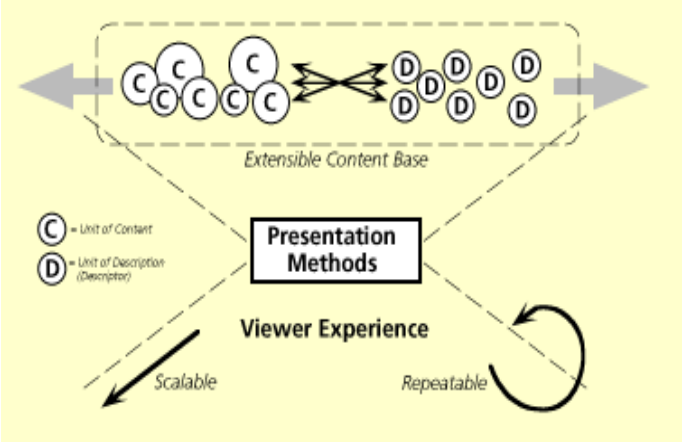

Fig. 6 - The Evolving Documentary model (Davenport and Murtaugh, 1995)

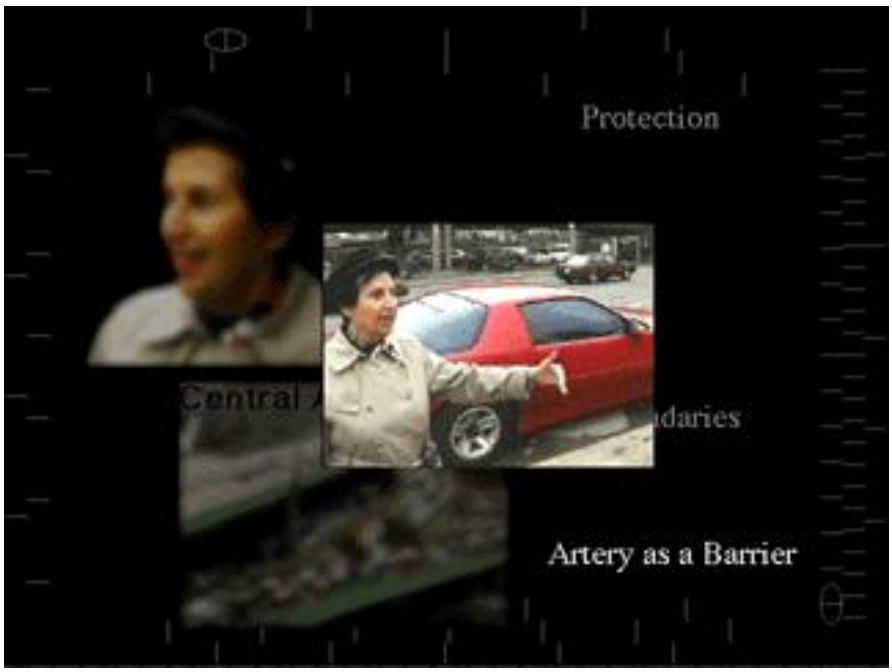

Fig. 7 - Screen shot of *The Browser* (Davenport and Murtaugh, 1995)

Two main documentary projects emerged from Davenport's group: *Boston Renewed Vistas* (1995-2004), and *Jerome B.Wiesner 1915-1994: A Random Walk through the 20th Century* (1994-1996). Both interactive documentaries allowed a certain scalability of the database, but their user's role was considered primarily extradiegetic (in the sense that the viewers' actions influence the process of the storytelling rather than altering actual events in the story world). 'As the story is told, the viewer is "passive" and attentive to the narrative. Only when the viewer wants to change the course of the presentation does he or she intervene' (Davenport and Murtaugh, 1995:5). Lippman's corollary of 'interruptability' is still valid; the system needs to be interruptable at any moment so that the user feels free to

intervene, but the other four corollaries (graceful degradation, limited look-ahead, no-default and impression of infinite database) are redundant. The "impression of an infinite database" is substituted by an "evolving database" where such database is expandable because content can potentially be added by both users and authors. We are back into the logic of the hypertext exploration but with an important difference: the video database can evolve through participation.

For the participatory mode I will use the metaphor of building. The author decides on the tools and rules and lays down the first layer of bricks, but there is room for collaboration and expansion. The function of the user is both explorative and configurative. She first browses and then can choose to add content. The author becomes a database designer. She sets the rules and modalities of participation and frames it by designing an interface that will orchestrate the digital documentary.

The Evolving Documentary was a first attempt to open the database by accepting external influences in order create a more dynamic world/database. Through the Evolving Documentary the transformative potential of interactivity becomes evident, as the artefact keep changing all the time. But in 1995, when Davenport and Murtaugh were experimenting with interactive narratives available technology limited this initiative, because CD-ROMs could not be modified once written to, and the tools available to the users of the Web at that time effectively prevented viewers from contributing. It is only when the Web turned into a collaborative media that other levels and types of participation became possible. Around the year 2004 the emergence of a social Web 2.0[49], that supports easy uploading of personal video streams with a decent quality of viewing, combined with the high penetration of broadband in Western Countries, served as tipping point for the exploration of new modes of collaborative video production. In the participatory documentary, the user is expected to influence the *processes* of documentary production (Dovey and Rose, forthcoming) in one way or another. As we will see in chapter five, through the analysis of *Global Lives* (2009-ongoing) as our main case study, there are infinite ways in which collaboration can be made possible in processes of an interactive documentary. This has led to much confusion in the field as for many people participation is synonymous of interaction – which would make any interactive

[49] Released to the public in 1993, the Web 1.0 refers to the first stage of the World Wide Web that was linking webpages with hyperlinks. It is only in 2004 that the Web acquired a more social and two ways logic of interaction, that we call Web 2.0.

documentary a participatory one. It will be made clear that, in this research, participation is seen as a specific type of interaction, within many others. Participatory interaction assumes that the interactor can add, change or circulate content - and therefore transform the artefact itself.

While Web 1.0 had mainly allowed Internet users, and corporations, to distribute videos to a global market the 'implicit architecture of participation' (O'Reilly, 2005:6) of Web 2.0 has opened video to levels of user participation. This has not happened in one day, and in fact we are still in a phase of high experimentation. The following is a brief overview of how Web 2.0 has been used so far to produce participatory documentaries. The complexity of the genre will justify the need for its own taxonomy, proposed in chapter five.

1. Several types of video channels/portals emerge with the early Web 2.0.

Those can be video blog[50] channels such as *United Vloggers (*video diaries uploaded by users, that support text comments) video sharing sites, such as *Youtube.com*, or even Web channels (commercial companies that create video channels fed by user-generated content, such as news channel *Current.com* and documentary channel *submarinechannel.com*). It is questionable if such channels/portals can be considered participatory documentaries. *YouTube* would not exist if people were not uploading videos on it. It would also not be browsable if users did not rate and tag other people's videos. The collaboration here is about creating content, create a presence in the database and become visible to other users. No specific cause is embraced, no reality needs to be extended by the individual point of view… to be on YouTube is to exist on the Web, to be part of the database[51]. If we take the widest definition of a documentary, as a container for non-fictional material, then probably all of those examples can be considered interactive documentaries – to the extent that they allow a certain level of interactivity with the content, so excluding those websites that just distribute already made documentaries without allowing

[50] The so called "vlogs", or video blogs, started becoming popular around the year 2005. Vlogs are self-shot videos, normally biographical, distributed over the Internet using RSS feeds, for automatic aggregation and playback on mobile devices and personal computers.

[51] Obviously cases such as Nico Nico Douga are exceptions. By engraving a comment on someone's else video the participation becomes co-creation of a reality that has as many layers of interpretations that commentators.

participation from the viewers. But if we see documentary as a mediation of a precise reality, around a "topic" in a sense, then we should exclude general video sharing websites such as *Google Video* and *YouTube* – unless we wants to see them as a meta documentary on our society.

2. Video sharing platform allow comments, sometimes directly on the video stream.

Nico Nico Douga (2007-ongoing) is a Japanese video sharing platform with a difference: users can write their comments directly on the video footage they are viewing. The video gets populated of layers of text comments appearing on specific shots that are literally changing the shot into an evolving layered hybrid media.
The collaboration contained in *Nico Nico Douga* is different from the one of *YouTube*, as it goes one step further: user's feedback is not added as separate text (on the side or below of video) but it transforms the materiality of the video itself. Here there are several levels of User Generated Content: the initial video uploaded by the single user and the infinite re-elaboration of it by a community of writer-viewers.

3. The Web allows established documentary makers to create social communities around the issues raised in their linear documentaries.

In 2007, *Over The Hills,* a Dutch linear documentary by Sunny Bergman, denounced the obsession with the "perfect" feminine body propagated by the media. A website was created for the lunch of the documentary. This website, www.beperkthoudbaar.info, hosts a forum where women can post their own videos and texts and discuss about the relation that they have with their own bodies. The website - that hosts a forum, a manifesto, and some papers and research - has become so popular that one can question if this is not in itself an interactive and collaborative documentary, rather than just the website of a documentary. By using the Internet to get feed-back from their viewers documentary producers de facto allow a feed-back loop channel that does not affect the original linear documentary but creates an interactive documentary on the side of their original film. This type of participatory website marks the transition between linear and non-linear documentary production. What began as a promotional tool, effectively became an

independent participatory artefact that transforms itself through user comments and requests.

4. The Web is used to gather video footage from users on a specific topic. This footage is then edited by an author to create a linear form.

Artist Sarah Turner has asked female participants to send her, through the Internet, personal mobile phone videos shot around the topic of 'overheated'. This collection of videos about women's frustrations or feelings was then edited live during a session at the ICA[52] on the night of the 9th of March 2008. *Overheated Symphony* is a linear documentary entirely created with collective mobile footage. Collaboration here touches the production of content, not the final form of the linear documentary that is controlled by a single author.

A similar approach has been used more recently by filmmakers Ridley Scott and Kevin Macdonald who used YouTube to gather video content for their movie *Life in a Day* (2010). YouTubers were asked to record glimpses of their day on the 24th of July 2010 and to post them onto a dedicated YouTube channel. Although their participation does impact the production process of the final movie (to the extent that it would not exist without their content) it does not take control of its final form. The transformative effect of participatory interaction is arguable here, as will be discussed at length in chapter five.

Other projects, such as the *Johnny Cash Project* (2010-ongoing) and *Man with a Movie Camera: Global Remake* (2007-ongoing) ask participants to change, or design, single shots, or frames, in a video that is already uploaded on a website. Here again the individual only re-touches an already proposed form, limiting her contribution to an infinitesimal, yet existent, transformation of the artefact.

5. The Web is used to gather video footage from users on a specific topic. This footage is not edited into a linear form but presented as a fragmented part of a larger Web portal.

[52] The ICA is the Institute of Contemporary Art in London, U.K.

6 Billion Others (2003-ongoing) interviews people around the world about their lives and beliefs and upload their answers onto a website that re-presents them as a multitude of faces. By clicking into one face the Internet user can watch the video fragment of the interview. The Internet user can also record herself and upload her contribution to the website.
Similarly *Mapping Main Street* (2009-ongoing) proposes to document all the Main Streets of the USA. Any user can upload photos, texts or videos that will be geo-tagged into a website. The interface of *Mapping Main Street* is a map from where the Internet user can browse through individual contribution through what I have called in chapter five a mosaic interface. If the collaborator is part of the production process the Internet user is just browsing content through a hypertext logic.

6. The Web is used not to add content but to participate to editing or production of a documentary.

The unfinished *Echo Chamber Project* (2006), by filmmaker Kent Byes specifically focuses of the post-production phase of documentary making. Kent Bye wants to make a documentary that reflects viewers' interests and ideas about the Iraqi war. During the first six months of the conflict he recorded all major news coverage on the subject (from ABC, CBS and NBC American television) and he conducted more than 50 hours of interviews himself. He then invites users to tag and rate the visual clips that he has extracted from this video database, and partially uploaded on the Web, in order to place them on play lists that will respect the collective user's point of view, rather than the media point of view. The fact that such project was never finished posed questions of user motivation that will be discussed in chapter five.
On the other hand the successful *RiP: A Remix Manifesto* (2004-2009), by Brett Gaylor, uses a community of online re-mixers to re-edit rushes and propose new footage and ideas. Although the final documentary has been highly edited by Gaylor this project attempts to open the production phase to user participation proving that collaboration can go beyond User Generated Content and can be placed at any point of the production process.
Finally *Global Lives* (2009-ongoing), the main case study in chapter five, attempts to open collaboration to the governance of a documentary, effectively trying to co-author the artefact by empowering collaborators to a decision making level.

Potentially this is where the transformative power of interactivity is at its highest -as interactors do not only generate content, but they can also transform the interface and interactive structure of the whole project, if the community agrees. As *Global Lives* is still in production as I write, it is difficult to judge its chances of success but the consequences of a vision of interactivity as co-constitutive and empowering will be discussed in chapter five.

7. The Web is used as a production tool to get in contact with the subjects portrayed in the documentary. No Internet user participation is considered.

Differently from all the project cited so far, where collaboration is opened to the Internet user, *The Thousandth Tower* (2010) - part of the larger *Highrise* (2009-ongoing) project - limits participation to the subjects portrayed in the documentary. Director Katerina Cizek sees documentaries 'not as a way to speak about people but to see how it can be a tool to work with for change'[53]. If the final interface of the project uses a hypertext logic, where the user can only click to reveal content, the process of production is highly participative. Subjects are highly involved in the shooting and in taking responsibility to engender a process of change and dialogue with the local authorities. Here participatory interaction is about making an impact to the life of the subjects, not on the artefact. How transformative of the artefact itself is such approach will be discussed in chapter five. What counts for now is to highlight that the production process of a documentary starts with the encounter with its subjects and that if interactive media is used to transform such relation into meaningful social impact then we are facing yet another possible logic of participation.

Those seven typologies of websites exemplify the main approaches to participation that can be distinguished at present. No doubt there will be others, but for the moment, even this partial list shows the diversity of actions behind the notion of participation.

The one-to-one relationship of today's human-computer interaction means that, although the outcome is collaborative, the user's experience is not. She acts in

[53] Private discussion with Katerina Cizek, on the 16.09.11.

private. Her action is not about selecting paths (as in the hypertext mode) or simulating situations (as in conversational mode) but instead about contributing to a constantly evolving whole, that might never be finished. The metaphor, the figure, that would best represent the participatory mode is the one of *building*.

What sort of negotiation with reality might this enforce? For the reality to come into being, to be populated, it needs the co-creation of the users. The author acts as a facilitator, and sometimes a game controller. Exchange and conversation do exist, but often not in real-time. Users can first browse in the exploratory logic of the hypertext mode, and then decide to leave a trace of their passage and reflection by uploading text, pictures or videos. When for one reason or another people lose interest and stop participating the building stops its self-making. Abandoned websites may still have a presence on the Internet, but if they have no traffic anymore, and people stop participating, they become frozen objects. This could be seen as their "death".

The experiential mode

> Pervasive computing and locative media are emerging as technologies and processes that promise to reconfigure our understandings and experiences of space and culture. (Galloway and Ward, 2006:1)

When the computer becomes portable and linked to a wireless network, when mobile phones allow access and creation of content from anywhere, when a Global Positioning System (GPS) can roughly calculate the position of a digital device in physical space… then locative media emerges as a technology that uses digital devices in physical space. The logic of interaction that locative media needs in order to develop to its full potential is far from the model of algorithmic computation, proposed by Alan Turing for his machine. If anything it is the opposite. If interactivity is going to happen in a physical and open environment, and maybe with other people, the interaction will depend on multiple variables (people's reactions, weather, slippery shoes, traffic etc…) most of which are not predictable. From a Human Computer Interaction (HCI) point of view this means that interaction happens in a space that is unpredictable and that it is always 'situated' in a dynamic context. For HCI theorists Harrison, Sengers and Tatar interaction becomes 'a form of meaning making in which the artefact and its context are mutually defining and

subject to multiple interpretations' (2007:1). The system needs to adapt to an environment that is dynamic. Interactivity is seen as the two way feed-back loop that allows both the system and the environment to adjust to each other. This type of computation has been called by Eberbach, Goldin and Wegner an *interactive computation*[54] because it 'involves interaction with an external world, or the *environment* of the computation, *during* the computation - rather than *before* and *after* it, as in algorithmic computation' (2004:173, italics in original).

As we will see in chapter four, when interactive computation mediates the relationship of the user with a physical environment it creates a *dynamic space* (Massumi, 2002:183) that I will consider a space of transformation. Compared to other types of interactive modes, the experiential one has the peculiarity of adding layers of data to physical space, creating a complex and dynamic context that De Sousa and Silva have called a 'hybrid space' (2006:262). Consciously referring to theories of affect (James, Deleuze, Guattari and Massumi) I will call such context a space of *affective experience* – where felt reality is more than what is graspable by our senses (felt experience); it is a transitional state, the result of a complex and dynamic relation between physical abilities, cultural interpretations, different levels and understanding of space and time resulting from the constant changing relation between the individual and her environment. When a physical environment is mediated by a locative documentary new constraints, and new affordances, are added to the relation participant-environment. By moving through this new constrained space one can generate new understandings, and new forms, of both the environment and the participant. It is this bi-directional transformative effect of the experiential documentary that we can observe as characteristic of this form.

When around the year 2000 pervasive gaming, learning environments, locative art and non-tasked oriented computing started to be explored[55] the user could move away from the screen, the graphic interface and the mouse, to be situated in physical

[54] Eberbach, Goldin and Wegner explain that Turing himself thought of the Turing Machines as 'only appropriate for computing recursive functions over integers' and therefore he proposed other types of machines such as the 'choice machine' and the 'oracle machine'. Eberbach, Goldin and Wegner call this alternative view of computation, which Turing envisaged but did not follow up, the 'Super-Turing computation' (2004:174).

[55] In her PhD *A Brief History of the Future of Urban Computing and Locative Media* (2008), Anne Galloway explains how the sudden rise of mobile penetration in Western countries, at the turn of the 21st century, served as a catalyst for the flourishing of pervasive media.

space. From a HCI point of view it meant that the system could not be modeled for every contingency and therefore had to consider the interface and the computation as *embodied* and *situated* (Harrison, Sengers and Tatar, 2007:6, italics in original). In *Greenwich Emotion Map* (Nold, 2005) local inhabitants walk around their neighborhood wearing a device that records their emotional arousal and links the data with their GPS location. They can also record their thoughts and memories while freely walking in Greenwich. The information that is gathered by artist Christian Nold is a situated one, an information that is linked to the place that engendered it.

Games and art projects were the first to experiment with locative technology[56]. Those have been well documented by Galloway and Ward in their article *Locative Media As Socialising And Spatializing Practice: Learning From Archaeology* (2005). Interestingly, there is little or no reference in literature to "interactive locative documentaries". However, when I had private conversations with interactive artists Chistian Nold[57] and Matt Adams[58] they both considered their projects as a way to document a reality through collaboration and physical experience. I therefore include them as examples of experiential interactive documentaries.

Speaking about the technology of biomapping[59], that was used in his *Greenwich Emotion Map (2005-6)*, Nold told me that what he is trying to do is "to allow people to talk about their bodies in the sense that the body is not something that is being defined as being the site of action but as *you* deciding what your body represents […] you can start speaking about your body, you can take control back"[60]. For the participants, those who carried the biomapping device, the *Greenwich Emotion Map* is an experience of awareness, where their relation with the city is transformed

[56] Classical case studies for locative media are *Can You See Me Now?* (2001) by Blast Theory in collaboration with the Mixed Reality Lab at the University of Nottingham, *Bio Mapping* (2004) by Christian Nold, *The Milk Project* (2004) by Esther Polak and *Amsterdam Real Time* (2002) by the Waag Society.

[57] Recorded interview held in London on the 20.03.08.

[58] Recorded interview held in Amsterdam on the 26.09.07

[59] Christian Nold's description of the project on his website is the following: 'The project involved weekly workshops with 80 local Greenwich Peninsula residents with the aim of re-exploring the area afresh with the help of a Bio Mapping device. The device invented by the artist measures the wearer's Galvanic Skin Response (GSR), which is an indicator of emotional arousal in conjunction with the wearer's geographical location. The resulting 'Emotion Maps' encourage personal reflection on the complex relationship between oneself, the environment and ones fellow citizens. In a group, people then commented about their experiences and left annotations on the map' (available from http://www.emotionmap.net/background.htm. Accessed 8.05.08).

[60] Recorded interview. Date: 26.09.07, minute 22.

through their interaction with it. The piece itself keeps being transformed by the people that participate till the moment artist Nold stops the experiment and creates a physical map out of all the gathered data. For the audience, that goes to see the documentation of the project in an art gallery or public space, the *Greenwich Emotion Map* is a physical map, a piece of paper, that documents emotions and feelings about the urban space. While the map documents people's emotions, the experience is transformative for its subjects.

Experiential documentaries do not need to be participatory. Obviously interactors need to "participate", but if they do not add to the production process of the piece they will not be called participatory in this research. In other words: if the participant accesses content linked to a space, just by walking through it, but does not add content to such database, I would argue that the project should still be considered an experiential one – because it affects the perception of physical space, and therefore transforms it for the user. In *34 North 118 West* (2003), *MIT in Pocket* (2003) and *Heygate Lives* (2010) interactors do not add content to the artefact, they just retrieve authored content linked to a specific location while walking through such space (Los Angeles, the MIT campus and London's Heygate estate). This authored content is not just adding a layer of information about a specific location, but it is augmenting and changing the felt reality of such physical space for the participant. Yet again, interaction has a transformative effect here but this time it does not change the artefact itself. Moving through the space mediated by those locative documentaries has transformed the felt, and affective, perception of it for the user but not the interactive documentary that uses a close database through which the interactor navigates by positioning herself in space – rather than clicking on a hyperlink. It will be argued in chapter four that the idea of *documenting* a place in locative documentaries assumes that physical engagement is a catalyst for a different type of meaning, a meaning that would be different if the participant was to sit in front of a screen. As we will see the experiential mode implies *embodied interaction*[61] (Dourish, 2001).

Finally *Rider Spoke* (2007), by Blast Theory, is an experiential documentary that plays both on embodied interaction with space and participatory creation of a layered space. Because of its complexity, and of its emotional impact on its

[61] For Dourish 'embodied interaction is the creation, manipulation, and sharing of meaning through engaged interactions with artifacts' (Dourish, 2001:126).

interactors, I have chosen it as main case study for chapter four. When I asked digital artist and game designer Matt Adams, from Blast Theory, which of his work could be defined as interactive documentary, he proposed *Rider Spoke* because 'it invites the audience to make recordings/testimony on the streets of the city'[62]. For him, as for Nold, the locative project is a way to document people emotions and of interacting with the urban space. In *Rider Spoke* the participants are invited to go to the Barbican, a cultural centre in London, with their own bicycle, or to hire one at the venue. A handheld computer (Nokia N800) is mounted on the handlebar of the bicycle. This mini computer has GPS capabilities, an earplug and a microphone incorporated into it. The participant sets off into the streets of London listening to the audio commands of the device. The device asks the participant to find a spot in the city, to stop there and to answer to a specific question by recording the answer into the microphone. The questions can be anything from "Describe yourself. What are you like? And how do you feel?" to "Find a quiet place and tell me who or what makes it all right for you". The answer is then stored with its GPS positioning so that it will be retrievable by any other participant that stops in a nearby location.

Fig. 8 - *Rider Spoke*'s handheld device (http://tinyurl.com/c6efahs)

[62] From personal email conversation. Date: 30.04.08.

Fig. 9 - *Rider Spoke*'s participant using the earplugs
(http://www.guardian.co.uk/stage/theatreblog/2010/mar/31/internet-theatre-twitter-texting)

Rider Spoke unfolds in real time through movement, more exactly through the encounter between the dynamic systems that are the city, the rider and the artefact. It is a completely private experience (I am alone with my bicycle) and yet I leave traces of my presence (via the audio files that I record) to others that I will never meet but that I can sense (via their audio files). There is privacy and proximity mixed on different levels. The city space is experienced with a new awareness: an embodied experience of a digitally layered space. Also, there is no accessible final representational form for *Rider Spoke*. The audio files that all the participants have recorded in real space have not been used to create a final audio map of London (in a way that Christian Nold has done in his emotion maps). This cultural object is ephemeral, lasts the time of an experience and transforms people's affective experience of their city, for the time of a ride.

Rider Spoke puts us in relationship with points of view that differ from the one that we experience when we are cycling in the city. It presents us with a reality that has layers and that is composed by multiple points of view. Few experiences could be more accurate than *Rider Spoke* in mediating our awareness of urban space. The feeling is not just of immersion (as when swimming in water) because *Rider Spoke* asks you to describe your experience with words. The feeling is therefore transformed in self-awareness (why do I like this spot of London?) through my actions (I am asked to record my answer). My point of view, on the other hand, is transformed into "one of many" (I can listen to other people that have also selected this spot and my reply will be available to future participants).

The strength of the experiential mode is precisely that it puts us in relation with a layered and affected space. Other modes of interaction, as seen before, place us differently in the reality they want to portray. But by using one mode of interactivity, rather than another, each interactive documentary affords a specific network of actions that directs our doing, and therefore places us in a specific type of relation with our world. If the metaphor we employed for the hypertext mode was *hitchhiking*, and for the participatory mode was *building*, what should the metaphor be for the experiential mode?

Perhaps an appropriate metaphor could be *dancing*[63], an embodied communication mode that depends on the environment, that needs movement, and that counts into the presence of others. In such mode the things that a user/participant can do are nearly endless. For once, all of Aarseth's active feed-back functions are ticked: the user explores a space (explorative function), plays a character -often herself (role-playing function), participates and adds content to the system (configurative function) and can have an aesthetically motivated journey (poetic function). The author, on the other side, has the role of designing experiences in a dynamic environment, designing for the emergence of meaning through interaction with a layered world.

Summary

This chapter aimed at defining both linear and digital interactive documentary forms by highlighting the complexity of the documentary form and the different possible ways to negotiate and mediate reality. Definitions of linear documentary have changed over time. The term still means different things to different people. I have followed Bill Nichol's approach, using a systemic definition that sees documentary as a set of relations forged between the author, the viewer, the media and what is around them. Those relations are changing with time; they are influenced by social, political and technological change. The different relational logics that have been

[63] For dancer and academic Erin Manning, dancing is more than moving in space with music, but a way to create space and body though movement. 'The dancer's body is qualitatively different from a body walking to the bus stop because of the variety of techniques that make up the dancing body. The dancer moves not toward a destination, but toward her capacity to shapeshift. This is a key aspect of technique: the dancer learns to continuously relocate the ground as an element of experimental spacetime, creating momentum with and through the ground toward gravity-defying revectorization' (Manning, 2006:39).

dominant during last century's documentary history have been classified as *modes of representation of reality* by Bill Nichols (1991:32). Those modes are ways to 'frame and organize (reality) into a text' (1991:8) and therefore they are symptomatic of a modes of 'negotiation' with reality (Bruzzi, 2000:125). It is the idea of logics of negotiation of reality that I have retained to analyze digital interactive documentaries claiming that, once the user is demanded an active participation in the documentary, the negotiation happens through interactivity.

A number of questions arise: can we distinguish degrees of user participation? Can we identify a digital artefact which changes continuously depending on its make-up, context, and the uses to which it is put? Can we create typologies of interactive documentaries, that are neither dependent on technologies, nor on the subject matter, and which emphasise the nature of the relationship between the artefact with the reality it portrays?

In order to respond to such questions I have proposed my own definition of interactive documentaries. In this research any project that starts with an intention to document the "real", and that does so by using digital interactive technology, can be considered an interactive documentary. It is not the fact of being digital, that gives it a specific form, nor the fact of documenting, but the fact of *documenting through interactivity*. The agency of the user, her possible doings, transforms the artefact- and possibly also the environment and the user herself. In order to distinguish between levels, and consequences, of such transformation I have proposed to classify interactive documentaries by the *modes of interaction* that are at their core.

Whether interactivity is semi-closed (when the user can browse but not change the content), semi-open (when the user can participate but not change the structure of the interactive documentary) or completely open (when the user and the interactive documentary constantly change and adapt to each other) will determine what type of interactive documentary they are. I have proposed to call those different modes of interaction the *conversational*, the *hypertext*, the *participatory* and the *experiential* mode. For each mode a metaphor was proposed and its user functionalities, the role of its author and the logic of interactivity that inspired them, where defined (see Table 1). Those modes are not hierarchical, not chronological, and definitively not exhaustive in representing a field in constant evolution. Most interactive documentaries are actually hybrids which mix two or more of those modes together. But those modes are a way to see how the interactors of the artefact are positioned

and, by extrapolation, what is their assumed ontological position in the world. What can they do? How far can they take control? What are they responsible for? How can they create meaning from the situation in which they are? Which other actants participate to the negotiation of reality that is orchestrated by the artefact?

This research proposes that interactivity is a way to position ourselves in the world, to perceive it and to make sense of it. We will see in chapter two that such relation is bi-directional: we affect our environment while we are being affected by it. This co-constitutive notion of interaction will be traced back, in the next chapter, to cybernetics' notions of feed-back, structural coupling, and autopoiesis. By the end of this thesis we shall see the levels of transformation of the artefact that are made possible through the interaction that the interactive documentary affords. This is similar to question how we change as human beings through the interaction that our environment has with our bodies and minds (but also, how can we change our world back).

The next chapter will therefore propose a methodology to see the interactive documentary as a relational object: the *Living Documentary*.

	Interactive documentary examples	***Logic of interactivity (different sources)***	***Function of the user (Aarseth)***	***Role of the author***
Conversational mode **(Metaphor = Conversing)**	• the *Aspen Movie Map* (1980) by MIT • *Sim City* (1989) by Will Wright • *JFK Reloaded* (2004) by Traffic Software • *Gone Gitmo* (2007) by Nonny de la Pena	Inspired by Andy Lippman's 5 corollaries: 1. interruptability 2. graceful degradation 3. limited look ahead 4. no default 5. impression of infinite database	Explorative Role playing Configurative	To create a world, its rules and the user's agency
Hitchhiking / hypertext mode **(Metaphor = Hitchhiking)**	• *Moss Landing* (1989) by Apple M.MediaLab • *Forgotten Flags* (2007) by Florian Thalhofer • *Journey to the End of the Coal* (2008) by Honkytonk Films	Inspired by Turing's algorithmic computation: • limited storage • computation is closed • behavior is fixed	Explorative	To create possible paths within a closed database
Participatory mode **(Metaphor = Building)**	• *Boston Renewed Vistas* (1995-2004) by Davenport • *6 Billion Others* (2008) • *Global Lives* (2009-ongoing) by David Harris	Inspired by : • interruptability • evolving database	Explorative Configurative	To create the condition to populate a database and decide what to do with the database
Experiential mode ***(Metaphor*** = **Dancing)**	• *Greenwich Emotion Map* (2005-6) Christian Nold • *Rider Spoke* (2007) Blast Theory	Inspired by: interactive computation (or the Super-Turing computation) • interaction with the world • infinity of memory and time resources • evolution of the system	Explorative Role Playing Configurative Poetic	To design experiences in a dynamic environment

Fig. 10 – Table 1: Modes of interaction in digital interactive documentaries

Chapter 2 – The interactive documentary as a Living Documentary

Although interactive documentaries have existed since the 1980's the explosion of the Web in the last five years, coupled with Web 2.0's social and participative nature, has dramatically increased the number and the variety of documentary artefacts. This research started from the observation that no clear terminology is currently available for the variety of interactive documentaries styles that have recently emerged. Terminologies such as new media documentaries (Castells, 2011), webdocs (Guillerme, 2010; France 5 television[1], 2011) docu-games (Whitelaw, 2002; Raessens, 2006) cross-platform documentaries (Bulkley, 2010; Bell, 2010) and interactive documentaries (Goodnow, 2004; Galloway et al, 2007; Choi, 2009) are all mixed up without clear understanding of their differences. The lack of precise terminology is reflected, even more importantly, in a lack of clear conceptualisation able to gather, and do justice, to the complex and ground-breaking nature of the new aesthetic tools that are emerging in interactive documentary.

As seen in the first chapter there is now a critical mass of examples to trace the various emerging forms of interactive documentaries. This allowed me to establish four modes of interactive documentaries: the hypertext, the conversational, the participatory and the experiential mode. This classification is not the only possible way to differentiate families of interactive documentaries; it has value because it places interactivity at the centre of the analysis of this new digital form. Such taxonomy is important because it allows us to differentiate between families, or types, of interactive documentaries. But what such taxonomy does not offer is a methodology of analysis of the single artefact. This will therefore be the scope of this chapter.

When we speak of a film/video based linear documentary we have the tools to analyse it. Linear documentaries are time based artefacts. Typically they are composed of 24 images, or frames, per second that follow each other in sequential order. Each image can be analysed as a specific form, with its characteristics of

[1] France 5 television has a part of its website totally dedicated to what they call "le webdocumentaire", or "webdocs". See http://documentaires.france5.fr/taxonomy/term/0/webdocs, accessed 16.01.11.

framing, composition, salience and information value (Kress, G. and van Leeuwen, 1996:183). A group of those images, when played by a projector, can then be analysed in terms of shot framing, cinematograohy, editing, special effects, sound, genre and narrative style. Classic books on film language offer precise guidance on how to analyse a documentary from a film language point of view – see in particular Bordwell and Thompson (2004), Grant and Wharton (2005), Nelmes (2003) and Arijon (1976).

But it is argued in this thesis that the interactive documentary is not the extension of linear documentary into digital media, it is "something else". Its digital nature implies modularity - the fact that it is created by independent objects linked to each other where each file is accessible and independent from the others (Manovich, 2001:31) and it also implies variability – the fact that 'a new media object is not something fixed once for all, but something that can exist in different, potentially infinite versions' (Manovich, 2001:36). Its variability also means that the interactive documentary can change and evolve, allowing collaborative creations that were not possible with film and video. Its interactivity makes it a connected and dynamic object where 'spatial montage' (Manovich, 2001:322) – the juxtaposition of images on the screen - may replace 'temporal montage' (Manovich, 2001:322) – the sequential order of film images – or even create new types of narratives.

This chapter proposes a methodology of analysis that looks at interactive documentaries as relational objects, artefacts that link technologies and subjects and that create themselves through such interaction. My hypothesis is that an artefact that is relational in its core essence cannot be studied as a finite form but needs to be addressed through the complex series of relations that form it and that it forms. In what follows I thus will clarify the concepts of "relational entity", "autopoiesis", "feed-back", "structural coupling" and "assemblage". Those concepts will be crucial in defining the interactive documentary as a Living Documentary.

The interactive documentary as a relational entity

As media critic Lev Manovich has pointed out in *The Language of New Media*, digital objects have their own, new characteristics. 'In old media elements are "hardwired" into a unique structure and no longer maintain their separate identity, in

hypermedia elements and structure are separate from each other' (Manovich, 2001:41) which means that an interactive documentary can be composed of visual frames but also by other data and algorithms which can potentially create infinite forms. Depending on the way data and algorithms are matched, the documentary can take shapes that are more or less branching, evolutive or collaborative. The form of the interactive documentary is much more fluid, layered and changeable than that of the linear documentary. The cut is replaced by the hyperlink which immediately splits one form into multiple possible forms. The cut, that allowed the creation of meaning by establishing a fixed chain of events, is now an opening to possibilities where the intentionality of the author is replaced by a dialogue between the user and the possibilities that the interactive documentary system offers. Therefore the interactive documentary cannot be analysed as a single form composed by frames; in interactive media there are new variables: code, interfaces, algorithms and an active user. Those variables are connected in such a way that each influence each other. If a line of code changes, the interface might change so that the choices of the user might be affected and her actions on the interactive documentary too. The interactive documentary is therefore a fluid form, not a fixed one. It is the result of interconnections that are dynamic, real time and adaptative. An interactive documentary as an independent and stand-alone artefact does not exist. It is always related to heterogeneous components.

If one wanted to analyse the interactive documentary as a form of digital artefact, one could turn to Human Computer Interaction (HCI) theory. But it is argued in this research that the interactive documentary should not be confined to the simple human-machine interaction process - where the user acts and the computer reacts, creating a series of on/off loops that leads to the fulfilment of the user's goal. In their book *Human Computer Interaction*, Dix et al. state that 'the human user uses the computer as a tool to perform, simplify or support a task' (2004:124). The idea that the user, in HCI, is "in control" of the output of the machine is clearly explained in Jensen's in-depth analysis of the historical meanings of the terms "interactivity" and "interaction". 'A characteristic of the informatics concept of 'interaction'', says Jensen, 'is the central placement of the concept of 'control'' (1999:168). In HCI the user is to pursue an aim (writing a text, retouching a photographic image, buying a ticket online) and the author/designer of the software is to maximise the efficiency of the program (by minimizing the time it takes the user to accomplish the pursued

task). But, as eloquently defended by Harrison, Tar and Sengers in *The three paradigms of HCI* (2007), this vision of interactivity reaches its limits when interactive media becomes mobile, encourages a more embodied form of interaction and values "entertainment", or "satisfaction", rather than "efficiency". As interactive documentaries fall in the educational, or entertainment, category it would be difficult to measure their quality with quantitative methods. And since the user, in this thesis, is not positioned as "in control of" the artefact, but rather as "being part of it", a more systemic understanding of interaction is needed.

In *What is interaction? Are there different types?* Hugh Dubberly, Paul Pangaro and Usman Haque claim that the effect of interaction depends on the types of systems that are in contact. A motion sensor linked to a door (two static systems) will generate a single open/close reaction, while two people (dynamic systems) conversing, will engender endless possible outputs. Dubberly, Pangaro and Haque's systemic approach is relevant to this research, although it is not the number of options that interests us, but rather their effect on all the components of the interacting systems.

Interaction, in this research, will be considered the ensemble of transformations that occur to the artefact's components as a result of the human-machine inter-action. Such transformation can affect heterogeneous components: the database (database expansion through user generated content), the interface (for example random juxtaposition of images through algorithmic linking that creates new screens) or even the perception of space of the user (mobile content can change the perception of space by adding layers of content about a specific location). Interactivity is seen as native, as constitutive of the digital artefact. The user is not "observing" the digital artefact, not "controlling" it, but "being transformed" by it. This vision of interactivity is inspired by Second Order Cybernetics' notions of second order observer, positive feed-back loop and structural coupling – notions that will be explained next. Maturana and Varela's definition of 'autopoiesis' (1987:47), as the process of auto-creation that characterizes living organisms, will also be seen next as it allows us to understand interactivity as an open process rather than as a closed loop.

Cybernetics: feed-back loops, autopoiesis and structural coupling

It might seem unusual to use Cybernetic theories such as feed-back, autopoiesis and structural coupling to analyse cultural artefacts, but they can be particularly useful – especially as the history of computers and of Cybernetics are closely linked. Cybernetic theory developed in the 1940's in the context of the World War II. Mathematician Norbert Wiener had been working on an information system called an 'anti-aircraft predictor', an automatic firing machine that had to calculate the shift of trajectory of a plane so that the gun could automatically readjust its position and hit the aircraft target. This process was only possible using a feedback mechanism: a radar had to record the path of the airplane, a machine had to calculate 'the probabilities of its future course based on its past behaviour and convey this information to a servomechanism that would correct the firing of the gun' (Holmes, 2007:2). In order to work this feedback loop had to be circular and start again and again, constantly recalculating the distance between the trajectory of the gun and the moving plane. Trying to reduce the distance between the target and the trajectory of the gun is what Wiener later called a 'negative feed-back loop'[2] (1956: 252). Implicit in the anti-aircraft predictor was the notion of feed-back being possible only if linked to a goal: to hit the target. As explained in their article *The Three Paradigms of HCI* (Harrison, Sengers and Tatar, 2007) this idea of Human-Machine Interaction as control with a goal has influenced the initial logic of Human-Computer Interaction (HCI) when the first computer became available.

The word cybernetics (from Greek *kybernetes*, or "steersman") was popularised by Norbert Wiener in 1947 in this context: a post-war situation where machines were for the first time able to perform goal oriented patterns and self-regulating themselves. It is not surprising that at about the same time, more precisely in July 1945, Vannevar Bush published his famous article, *As we May Think*, in the Atlantic

[2] Later the notion of *positive feedback* was also developed. Contrary to the negative feedback loop that would tend to stabilize a system the positive feedback would normally deregulate a system and push it to a new state, or to destruction. In positive feedback an increase in the deviation produces further increases. For example, more people infected with the cold virus will lead to more viruses being spread in the air by sneezing, which will in turn lead to more infections. Producing both novelty and instability they can generate runaway growth or collapse unless stabilized anew with more inclusive negative feedback. When that happens positive feedback conduces to modifying the goals of a given system. This is why the process of positive feedback loops can also be seen as a necessary condition for change, as the instability that demands a new equilibrium. This is the reading of the term that I will retain in this research. For me positive feedback loops will be synonymous to change and adaptability, and not necessarily to destruction.

Monthly. This article has been later considered the precursor of the hyperlink and information retrieval. Vannevar Bush was working on the Memex[3], a sort of mechanized private file and library in the shape of a desk. Later, inspired by the Memex, a young radar technician, Doug Engelbart, began to work on what would result in the invention of 'the mouse, the word processor, the hyperlink, and concepts of new media for which these groundbreaking inventions were merely enabling technologies' (Montfort and Wardrip-Fruin, 2003:35). Cybernetics and computers have a common history.

An interesting parallel can also be drawn between the evolution of the role of the observer in Cybernetics and in documentary praxis. Up till the 1950's cyberneticians had generally assumed that the observer was outside of the system being observed. The scientist is assumed to observe what is happening in front of him, in a reality that is external to him. This approach has later been referred to as 'first-wave' cybernetics (Hayles, 1999), or 'first-order' cybernetics (Heylighen and Joslyn, 2001). Here a system is studied as if it was a passive, objectively given "thing" that can be freely observed, manipulated, and taken apart. In the 1960's a clear shift of thinking emerged, largely thanks to the work of Gregory Bateson and Margaret Mead. Cybernetics started to question its own methodology, and the role and way of functioning of its own subjects (the scientists).

It is interesting to note that the role of the observer has been crucial in both scientific and cultural realm during the 20th century. In the 1960's art also embraces this fluid view of connectiveness between author, artefact and audience. Umberto Eco has eloquently described in *The Open Work* (first published in 1962) how "openness" and choice have been the laitmotif of the 20th century and how in the 1950's and 1960's authors in all artistic disciplines (music, literature and visual art) have voluntarily searched for a maximum openness. 'In fact, rather than submit to the "openness" as an inescapable element of artistic interpretation he (the author) subsumes it into a positive aspect of his production, recasting the work so as to expose it to the maximum possible "opening" ' (1989:5). Openness is only possible if the author allows the participator to enter in the creative process. This logic of creation is a participatory logic rather than a representational one.

[3] In his article Bush describes the Memex as 'a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory' (1945:12).

For technology historian Andrew Pickering, cybernetics was at the core of a 'new scientific paradigm' (2002:413). Science, he says, was passing from a *representational idiom* to a *performative idiom* where its role was not anymore to represent the world and produce knowledge of it, but rather to 'do things in the world- with the emergent interplay of human and material agency' (2002:414).

One can see a similar paradigm shift in documentary praxis. The Cinema Verité of the 1960's (or 'Participatory documentary' for Nichols, 2001:116) and the subsequent 'Performative documentaries' (Nichols, 2001:130) critique objectivity and are rather interested in 'what it is like for the filmmaker to be in a given situation and how the situation alters as a result' (Nichols, 2001:116). The filmmaker is influencing the reality she documents in the similar way in which the scientist is part of the reality observed. So, in a certain way, what becomes crucial is a theory of the observer.

On a speech delivered to a scientific audience[4], cybernetic philosopher Heinz Von Foerster observed that 'a description (of the universe) implies one who describes (observes it)' and added 'what we need now is the description of the "describer" or, in other words, we need a theory of the observer' (1982: 258). The observer and the observed system started to be seen as linked but also inseparable since the result of observations would depend on their interactions. The observer too became a cybernetic system, who is trying to construct a model of another cybernetic system. This circularity is typical of what has been called in the 1970's Second Order, or Second Wave, Cybernetic - where cognitive processes are seen as constructing a reality via the interaction subject/environment. The world is seen as an active creation of our cognitive processes and this is why we cannot be neutral when observing it. As Von Foerster points out in *Observing Systems* 'the environment contains no information. The environment is as it is' (1960:254). The environment is not given anymore, it is constructed by us.

Second Order Cybernetic theory starts from a fundamental revelation, a shift in thinking, that some have called a scientific paradigm change[5]: the world can be seen as series of interconnected systems in constant relation to each other. We, as living cognitive organisms, are systems ourselves. When we observe the world we are

[4] The speech was delivered in September 1972 at the *Centre Royaumont pour une Science de l'Homme*, in France. An adaptation of the speech got then published in 1982 in Von Foerster's book *Observing Systems* under the title *Notes to an Epistemology for Living Things*.

[5] See Andrew Pickering's *Cybernetics and the Mangle* (2002).

observers observing systems that are in relation with us, and therefore our act of observation influences the system while at the same time the system influences us. This circularity, which is based on the fact that there is a mutual feedback loop acting between any subject and her environment[6], will prove to be a useful tool in this discussion. It is in this context that the definition of Chilean biologists Maturana and Varela of the living organism as a relational entity make sense: 'living beings' claimed Maturana and Varela 'are characterized by their autopoietic organization' (1987:47) where autopoiesis[7] is the process of self-making, or of auto-creation, and organization is 'the set of relations that must exist for the components of a system for it to be a member of a specific class' (1987:47). In other words any living organism materially self-constructs itself and by doing so distinguishes itself from its environment and acquires autonomy. Autonomy does not mean that the system does not need other systems to reproduce itself, nor that it can survive alone, but that 'it can specify its own rules, what is proper to it' (1987:48).

Abstracting "life" from the usual characteristics of "birth", "death" and "mode of reproduction" was perceived as liberating and revolutionary in a cultural context of the late 1970's/1980's. This maybe explains why autopoiesis was rapidly extrapolated from the biological context and used in philosophy (Deleuze, Guattari), social sciences (Luhmann), psychology (Bruner) and cognitive science (Thompson, Rosch, Clark and Noe).

But autopoiesis also comes with a specific reading of the notion of interactivity. In *Autopoiesis and Cognition* Maturana and Varela put particular emphasis on the

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[6] As noted by Katherine Hayles in *How we Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics (1999),* First Wave Cybernetic (that started around 1940s) was more concerned with the study of feed-back loops internal to an observed system. It is only in the 1960's that the shift to include the observer in the observed system happened. The world is an active creation of our cognitive processes and this is why we cannot be neutral when observing it.

[7] The original definition is slightly more complex: 'An autopoietic machine is a machine organized (defined as a unity) as a network of processes of production (transformation and destruction) of components which: (i) through their interactions and transformations continuously regenerate and realize the network of processes (relations) that produced them; and (ii) constitute it (the machine) as a concrete unity in space in which they (the components) exist by specifying the topological domain of its realization as such a network.' (Maturana and Varela, 1980:78). The example that Maturana and Varela give of an autopoietic system is the biological cell. The cell is made of various biochemical components and is organized into bounded structures such as the cell nucleus, various organelles, a cell membrane and cytoskeleton. These structures, based on an external flow of molecules and energy, *produce* the components which, in turn, continue to maintain the organized bounded structure that gives rise to these components. Maturana and Varela also contrast the autopoietic system with the allopoietic system, such as a car factory. In car factory raw materials are used to generate a car (an organized structure), but a car is something *other* than a factory, so it is a system that generates something else than itself.

concept of interaction. 'It is the circularity of its organization that makes a living system a *unit of interactions*, and it is this circularity that it must maintain in order to remain a living system and to retain its identity thorough different *interactions*' (1980, my italics). If we step from simple to complex organisms, and we see humans as autopoietic entities with self-making, self-organizing and adaptive capacities, we suddenly see how key the circular relation with our environment (structural coupling[8]) becomes - since it is this relation that shapes us in our becoming. Inter-*activity* is therefore seen as our fundamental way of being, our way of *relating* and *existing* through *doing*. If we extend this logic to interactive artefacts, such as interactive documentaries, then our interacting with them is a way to relate, and construct, our world. Also, if life is defined as self-organisation, adaptativity and change through inter-action, then the interactive documentary can be seen as a living entity.

A relational entity that affords the construction of realities

Cybernetic concepts of circularity, feedback loops and interaction have a cultural context. They are indicative of the cultural shifts of the 20th century, of the spirit of its times, of its zeitgeist. As seen earlier, the cybernetic shift of the role of the observer is parallel, and probably mutually influencing/ed, by the crisis of the author in literature, or of the artist in visual arts. Much has been said in the last one hunded years about the authorship of works of art, from Walter Benjamin (*The Work of Art in the Age of Mechanical Reproduction*, 1936***)*** to Roland Barthes (*The Death of the Author*, 1967) and Umberto Eco (*Opera Aperta*, 1989). The tendency of opening up the relationship author/subject/viewer has not escaped the moving image (Gene's Youngblood *Expanded Cinema*, 1970; Beryl Korot and Phyllis Gershuny's *Radical Software*, 1970-1974) and has passed through a redefinition of the filmmaker from an objective observer to an engaged actor in the Cinema Verité of the 1960's. As a result the documentary maker has become more of a performer, someone who acts

[8] Structural coupling happens 'whenever there is a history of recurrent interactions leading to the structural congruence between two, or more, systems' (Maturana and Varela, 1987:75). In simpler words, with structural coupling Maturana and Varela want to describe the mutual structural changes that various autopoietic unities encounter while interacting with each other and with the environment in a recurrent way. Their example of the shoe is quite fitting: the feet can be heart by the shoe but it will also shape the shoe. The 'recurrent interaction' between the two will bond them in a structural coupling where they are both shapers and shaped.

out onto the reality that she portrays and where, as film critic Anne Jerslev states, it is 'logically impossible to regard any documentary as a straightforward representation of an a priori given reality' (2005:107).

But when passing from analogue to digital media, the debate on the role of the author/observer/filmmaker goes one step further. The interaction afforded by digital media has blurred the distinction between author and user/viewer/reader/player. It is as an example of the changes that technology/technique can bring to our notion of creativity and narrative that the interactive documentary is interesting. We can see how the interactive documentary changes the status of the narrative: it is no longer the author who owns the narrative of the event, of the encounter, of its expression and the consequential experience by the user. In interactive documentary, the ownership of the production of the narration is communal: it belongs to all, author, user, environment, infinite possible transformations, all the causations it provokes – in a word: it belongs to the complex series of relations the interactive documentary is formed of.

In this new context, the user is acquiring more agency than in linear documentaries (she can act on the artefact) but she has little control of the result of her actions (those will depend on the options given by the author, by the serendipity of other users' contributions and sometimes by events which are external to the artefact itself). Effectively, while interacting with the artefact, she constructs her understanding of it through a series of action/reaction loops. At each steps she evaluates the result of her actions on the artefact. But, since the artefact has now changed, she now has to re-establish her position in it, and through it. The user constantly affects the reality portrayed by the interactive documentary; it is through such interaction that she positions herself, and it is through such positioning that she builds her understanding of reality.

This dynamic relation between the digital artefact, its environment and the user allows us to hypothesise that interactive media, and more precisely interactive narrative forms, are pushing forward a constructivist[9] vision of reality - where the

[9] Constructivism is a theory describing how learning happens and suggests that learners construct knowledge out of their experiences. Normally attributed to philosopher and natural scientist Jean Piaget (1896-1980), constructivism is frequently associated with pedagogic approaches that promote learning by doing. For Piaget we organize our worlds by organizing ourselves… and therefore our cognition is an active process. As cybernetician Von Glasersfeld points out, Piaget's thinking 'concerns the experiential world of the acting organism, not any 'external' reality' (1990:5). Key

user is active in constructing her own reality and knowledge. The inter-dependence between the user and the reality that is portrayed is what I define here as the political and aesthetical dimensions of the interactive documentary. The feed-back loop mechanisms (action/reaction) present in any interactive documentary are a simplified visualisation of our constant systemic interaction with the world. The user is actively *affecting* the reality of the interactive documentaries while browsing it, but she *is* also *affected* by it.

The current cultural studies debates around body and affect (Blackman, 2008; Brennan, 2004; Clough, 2008; DeLanda, 1992; Massumi, 2002; Lash, 2006; Latour, 2002, 2004; Parisi, 2004) put the emphasis on our pre-conscious connectedness with the world around us. In our context of interest, this means that we cannot know with certainty how an interactive documentary will affect a user. There might be different levels of change and these will depend on the subjects and on variables that are only partially under our control. But on the other hand, if we see the user and the digital artefact as being part of the same system, then each single change affects both of them. If users get used to engage in documentary narrative by sending videos and collaborating in interactive documentaries, they effectively act on the final shape of the documentary, but also on themselves. When they visualise the effect of their collaboration on the artefact, i.e. a new video being added to a website, they also become part of such collaborative effort. They become part of a community: those who have expressed themselves on a precise topic.

In some interactive participatory documentaries, that specifically use a mosaic aesthetic, such as *6 Billion Others*[10] and *Womanity*[11], it is clearly the totality of the present points of view that illustrate the commonalities of human beings (for *6 Billion Others*), or of women (for *Womanity*) as no single interview would be enough to cover such overwhelming topics. This type of approach to interactive documentaries highlights the constructivist idea that there are as many realities as there are perceiving individuals and that there is no single "truth". It is multiple points of view of women defining themselves that creates the concept of *Womanity*, and it is the ensemble of interviews in *6 Billion Others* that portrays our human condition throughout the globe. These interactive documentaries illustrate a world

names in constructivism are Lev Vygotsky, Jerome Bruner, Herbert Simon, Paul Watzlawick, Francisco Varela, Humberto Maturana and Ernst von Glasersfeld.

[10] Available from http://www.6milliardsdautres.org/), retrieved 04.07.10.

[11] Available from http://www.womanity.co.uk/Default.aspx, retrieved 06.06.10.

that is formed by variety of points of view and where the user "makes sense" of the website by actively choosing content and then creating her own point of view out of a multitude of stories.

A new species: the Living Documentary

Since the interactive documentary has not one but multiple potential forms, I am arguing in this research that a different approach is needed when analysing it. The term interactive documentary puts the emphasis on digital technologies and on linear documentary. Merging those two terms, as we have seen, has its limitations as it comes with a historical baggage. I propose instead to use the term *Living Documentary*[12], covering the same field, but primarily from a relational point of view.

The word "living" has been chosen because it relates to the idea of "being alive" (as in autopoiesis), but also because "live" can mean "happening in real time" - a characteristic of interactivity seen in chapter one. The word "live" also means "connectivity" – in the sense of a "live terminal" or a "live cable", where the parts are connected by electricity - an invisible flow. Finally, as a verb, "to live" means "to reside or dwell" in a place[13], putting the emphasis on our actions, and being, as situated in a place and time - another concept related to interactivity that will be analysed further in chapter four.

To look at interactive documentaries a Living Documentaries we need to accept three hypothesis:

[12] An earlier version of this chapter, published on my website, was using the word "Live Documentary" instead of "Living Documentary". I decided to change the name in order to put more emphasis on the autopoietic nature of interactive documentaries. Since then other people have used the same terminology, but giving it a slightly different meaning. For Dovey and Rose a Living Documentary uses live feeds and User Generated Content to create what effectively is a generative project (2012). For Brett Gaylor, part of the Mozilla Foundation, a 'Living Docs' (2012:1) are web-native project that 'are the descendants of classic moving images, but closely resemble software in their structure and approach' (ibidem). Both those definitions point at the participative and Web nature of Living Doc/umentaries. My definition of Living Documentaries is not in contrast with those other two, but it is larger. For me a Living Documentary does not necessarily have to be on the Web, nor be a participatory documentary, as all interactive documentaries are Living Documentaries – because they all have levels of living/autopoietic behaviors.

[13] From http://dictionary.reference.com/browse/live. Accessed 11.01.11.

1. Living Documentaries can be considered 'assemblages'[14] (Deleuze and Guattari, 1975:145). Assemblages are forged by, and forge, relations with other assemblages. This will allow us to explore which types of relations are dominant, constitutive and visible in interactive documentaries.
2. In Living Documentaries we will use a systemic understanding of interaction, such as the one proposed by Maturana and Varela - where positive and negative feed-back loops create a circular and transformative relation between a living entity and its environment.
3. Since Living Documentaries are in structural coupling with their environment, they can be seen as autopietic open system[15] (systems that can change themselves, and to a certain degree, can create themselves).

A Living Documentary is therefore an assemblage composed by heterogeneous elements that are linked through modalities of interaction. It can have different levels of autopoiesis and can be more or less open to transformation.

Autopoiesis and assemblage in the context of interactive documentary

In their original philosophical and biological realm the concepts of autopoiesis and assemblage might have seemed mutually exclusive – because autopoiesis has internal closure and determinateness[16], while assemblage is composed of external relations and has no goals. Before merging those two concepts, when studying the digital interactive documentary, it is important to clarify that there is no real contradiction between those two terms.

[14] The theory of assemblages considers that entities on all scales (from sub-individual to transnational) are best analysed through their components (themselves assemblages). The relationship between an assemblage and its components is complex and non-linear: assemblages are formed and affected by heterogeneous populations of lower-level assemblages, but may also act back upon these components, imposing restraints or adaptations in them. More precisely, I refer here to Deleuze and Guattai's notion of 'agencement' as described in *Kafka: pour une Littérature Mineure* (1975) were a stokehold is seen as both a 'collectif d'énonciation' (1975:145) and an 'agencement machinique de désir' (ibidem). Deleuze and Guattari describe a stokehold as a man-machine that includes, and defines, the man that puts coal into it. Their relation is forged inside a cultural and affective context that defines them both, and links them.

[15] The concept of 'open system' was first introduced by biologist Bertalanffy in his book *General System Theory* (1969:39).

[16] Living entities have a s a goal to maintain their organization through their lives.

As seen earlier, Maturana and Varela use autopoiesis to describe a living organism as self-generated (that can produce itself), self-organized[17] (that has a logic that defines it as different from something else), operationally closed (that keeps its organization during its lifetime) and in structural coupling with its environment (that is in constant interaction with what is around it). In order to be used outside of the biological realm theorists had to expand on the original definition of autopoiesis. This is what Guattari has done in *Machinic Heterogenesis* (1992:39) and Luhmann in *The Autopoiesis of Social Systems* (1986:172).

When I speak of autopoietic interactive documentary I am not saying that it is literally a biologically living organism, a breathing body with reproduction abilities. I am using the term in its larger meaning, as Luhmann does when he sees autopoietic behaviours in social systems even though they are not themselves living systems. But I also note that an interactive documentary is based on the interaction between a human, a context, and a technical (non-human) artefact. It is by opening up autopoiesis and by conceiving the idea of 'machinic assemblages' (Guattari, 1992: 40) between human beings and institutional and technical machines that Guattari proposes to see machines not as allopoietic[18], but as autopoietic. In cybernetic terms Guattari stops considering the machine as a stand-alone object and sees it as a system in relationships with other systems. Guattari, together with Deleuze, wants to see the machine as the ensemble of its connections. Moreover, the dualist view of the living machine (autopoietic) being different from the mechanical machine (allopoietic) is bypassed by Deleuze and Guattari's notion of autopoietic assemblages, where a man using a machine becomes a new assemblage, a constantly shifting entity. Following this view, a man using a bicycle becomes a cyclist where the energy of his legs, powered by the mechanism of the wheels, creates a movement that not only changes the nature of such man (from walker to cyclist) and the nature of the bicycle (from object parked on a street to a transport vector) but also the feeling of moving into a space (from feeling the ground with the sole of the feet to feeling the breeze created by the speed of the cycling) and ultimately changing the space itself (from a space of pavement to a space of traffic lights and

[17] Where "organization" is 'the set of relations that must exist for the components of a system for it to be a member of a specific class' (Maturana and Varela, 1987:47).

[18] Guattari goes back to Varela's definition of a "allopoietic" machine as a machine that produces something other than themselves (for example a printer that produces printed paper) by opposition from an "autopoietic" machine 'which engender and specify their own organisation and limits' (1992:39) (for example any living organism that reproduces itself).

roads)[19]. If we take this man-bicycle coupling and apply the same concept to the man-interactive documentary assemblage, we can question what this consists of and, more importantly, how it creates new relations of identity (human's vision and perception of the self), new creative assemblages (the possible materialities and mutating forms of the interactive documentary itself), new relations between the human-interactive documentary and the world (how has this interaction changed the point of view towards the world of both the user and the documentary) and, finally, how is the perception of the world itself changed by such assemblage?

As seen before, assemblage[20] is a word derived from Deleuze and Guattari[21] and later used by DeLanda[22]. In Deleuze and Guattari's terminology assemblages have two aspects: their content and their expression. By "expression", Deleuze and Guattari mean that an assemblage is 'a *collective assemblage of enunciation*, of acts and statements, of incorporeal transformations attributed to bodies' (1988:88, emphasis in original) and with "content" they see the assemblage as "machinic", as an assemblage of 'bodies, actions and passions, an intermingling of bodies reacting to one other' (1988:88).

DeLanda, taking from Deleuze, elaborates onto the machinic and enunciative aspects of the assemblages and puts the emphasis onto the assemblage's *relations of exteriority*. *Relations of exteriority* imply 'that the properties of the component part

[19] With a similar approach in *Reconnecting Culture, Technology and Nature* (2000), Mike Michael analyses how the machinic assemblages man-boots-nature or man-doglead-dog or man-remotecontrol-television are not separate entities, but fluid networks that connect heterogeneous elements.

[20] The word that Deleuze and Guattari used in *A Thousand Plateaus* is "agencement" which in English would be translated by "arrangement", "fitting", "fixing" or "organization". The English term 'assemblage' was used in Paul Fross and Paul Patton's first translation of the *Rhizome* in 1981, and then kept by Brian Massumi's later translation – when *Rhizome* appeared as the introduction of the book *A Thousand Plateaus*. In *Agencement/Assemblage*, John Phillips points out that the translation of 'agencement' by 'assemblage' restricts the understanding of the concept making it synonymous to collating, gathering or blending.

[21] As most terms *assemblage* has an evolution in Deleuze and Guattari's thinking and has been used in several texts with different emphasis. It first appears in the *Anti-Oedipe* (1972) and is then elaborated further in *Kafka: Pour une Littérature Mineure* (1975), in *Mille Plateux* (1980), *Cinema 1* (1983), *Foucault* (1988) and *Pourparlers* (1990). The definition that is most often referred to is the one given in Deleuze and Guattari's *Mille Plateux* (1980). In its English translation, *A Thousand Plateaus* (1988), assemblages are described as having two axes: 'on a first, horizontal, axis an assemblage comprises two segments, one of content, the other of expression. On the one hand it is a *machinic assemblage* of bodies, of actions and passions, an intermingling of bodies reacting to one another; on the other hand it is a collective *assemblage of enunciation*, of acts and statements, of incorporeal transformations attributed to bodies' (Deleuze and Guattari, 1988: 88).

[22] DeLanda refers to Deleuze's definition of assemblage ad 'a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them, across ages, sexes and reigns – different natures. Thus, the assemblage's only unity is that of co-functioning: it is a symbiosis, a 'sympathy'' (as quoted in DeLanda, 2006:121).

can never explain the relations which constitute the whole' (DeLanda, 2006:11) and that 'a component part of an assemblage may be detached from it and plugged into a different assemblage in which its interactions are different' (2006:10). By doing so DeLanda tries to determine the type of relations that the assemblage has with other assemblages, and this is the precise point of interest for us.

What is attractive in the notion of assemblage is to see entities as possible fields of relations, rather than fixed aggregation of their parts. Conceiving entities as linked in two ways (internally to their own structure, and externally to their own environment) is not new. The same concept is present in the notion of autopoiesis, and this is where one can bridge the two concepts of autopoiesis and assemblage. Autopoiesis and assemblage are linked to each other in several ways. They are both based on the notion that it is relations that create a whole. At the base of autopoiesis there is the assemblage, as creation of life is only possible through relationality. But at the base of assemblage there is autopoiesis (as it is the biological word coined by Maturana and Varela that has inspired Guattari to coin the concept of autopoietic 'machinic assemblages' (Guattari, 1995:40).

In conlusion, autopoiesis and assemblage are not contradictory terms, but rather complementary when applied to the Living Documentary. If autopoiesis puts the emphasis on logics of self-creation[23], on internal organization (what composes it) and on structural coupling (relations with the environment), assemblage puts the emphasis on heterogeneity of its components and co-relation with other assemblages. Both, combined, could help when looking at the Living Documentary.

Applying assemblage theory to interactive artefacts

Viewing a documentary as a form of assemblage is not unique to new media artefacts. A linear documentary, a film, or even a typewriter[24], can be seen as

[23] The fact that self-making is present in living entities in flesh and blood does not mean that such mechanism cannot be present in social entities (Luhmann) or agglomerate entities such as the Earth (Gaia theory). An interactive documentary does not breath and reproduce itself biologically, nevertheless its digitality make possible a certain level of self-making (that will depend on the interactivity that is imbedded in it and on the way it structurally organized). A participative documentary, that lives on the web and that depends on people's contributions, has a capacity of self-making, in the sense it's code and logic of interaction allows it to grow by incorporating people's contributions.

[24] I refer here to the chapter 'Qu'est-ce qu'un Agencement' in *Kafka : pour une littérature mineure* (1975) where Deleuze and Guattari elucidate how a stokehold, a typewriter or a castle can all be seen as an "agencement" (assemblage).

assemblages. The difference between an interactive and a linear documentary is the extra relational layer of interactivity. In a hypertext documentary a user has levels of interactivity with the content that will vary depending on the project. Those levels of interactivity can be low or high – resulting on more or less complex narrative structures- but they guarantee a dynamic relation between the interactive product and its environment (user, platform, author) that do not exist in linear film. From the moment the user can act on the story order of the documentary (the order of the seen events) she is effectively acting on the plot, on its delivery, on its length, on its form. I am not speaking of the "interpretation" of the story, but of its time based delivered order.

Assemblage theory is a way to see the world as constantly networked, so it could be applied to any relational object. But as Marilyn Strathern has remarked in *Cutting the Network* (1996), networks are difficult to identify and have a 'fragile temporality' (1996: 523). First one needs to identify a specific assemblage, out of thousand possible networks, but then, how can one enter, unfold, dissect such complexity in order to say anything meaningful about it?

When DeLanda decided to apply assemblage theory to social entities, he had to build a methodological framework in order to do so. In *A New Philosophy of Society* DeLanda proposes a clear methodology to apply Deleuze and Guattari's assemblage theory to practical cases analysis. Faced with the question of how can one pass from a general belief that assemblages are formed from a multitude of possible relations to the practical problem of delineating clear lines of thought to investigate when studying a precise assemblage (in his case the family, the city, society etc..) he highlights two dimensions – and by doing so he de facto schematizes and limits the openness of assemblages.

> 'In addition to the exteriority of relations the concept of assemblages is defined along two dimensions. One dimension, or axis defines the variable roles which an assemblage's component might play from a purely *material* role, at one extreme of the axis, to a purely *expressive* role at the other extreme'[25]. (DeLanda, 2006:12)

[25] DeLanda takes this definition from Deleuze's conclusion to *Mille Plateaux*. When concluding on assemblages (*agencements* in French) Deleuze and Guattari write 'The assemblage is tretravalentement: 1. contenu et expression; 2. territorialite et deterritorialisation' (1980:630). [*My translation*: The assemblage is tetravalent: 1. Content and expression; 2. Territoriality and deterritorialization].

In other words DeLanda analyses social assemblages trying to identify the sets of heterogeneous elements that are in relations through it. In an attempt to apply Deleuze's assemblage theory he somehow simplifies it by saying that any assemblage can be seen as the result of four arguments: their materiality (where do they take place, what are they make of), their expressive role (what do they represent, how do they communicate, what makes them visible), their process of territorialisation (what stabilises their identity) and their process of deterritorialisation (what destabilizes their identity).

In this research DeLanda's approach will not be followed, as the Living Documentary is not defined by four main arguments, but rather composed by multiple dimensions. The methodology that will be used instead will be multi-directional and will merge both concepts of autopoiesis and assemblage: it will look at the Living Documentary's organization, at its structural coupling with its environment and at its external relations with other assemblages. In order to avoid confusion with the terms, the ensemble of the relations formed by, and that form, a Living Documentary will be called *dimensions*. A *dimension* is a network of relations (which can be of any sort) that links the components that make the Living Documentary possible. *Components* can be material (the computer, the platform, the human body etc…), digital (the code, the software etc…), ideas (the idea of the author, the interpretation of the user), legal (the copyright) or cultural (expectations, aesthetics, politics etc…). They are elements that acquire sense and function depending on the dimension that contains them, and that are formed by them, but they are also dimensions by themselves. The component "interface" is itself the result of other components such as "technology", "market", "user's needs", "fashion", "platform", "software" etc... A component, then, can be zoomed in and zoomed out from. It accepts heterogeneity and it is while relating to others that it acquires a role and a meaning. When linked, and separated by an observer, several components can be seen to form a *dimension of investigation*. A Living Documentary, then, is an autopoietic assemblage composed of heterogeneous components that can be linked by an observer through infinite dimensions of investigation.

In the following chapters, a main case study will be chosen for each interactive mode described in chapter one. The most relevant components, and dimensions, that compose such Living Documentary will be made visible and will be analysed. In

such way it will be possible to question the aesthetic, political and ontological consequences of each case study. Looking at Living Documentaries as living entities means questioning their characteristics, analyse how they adapt to their environment and questioning how they might die. In order to do so, we will use the following questions to analyse the case study of the next chapters:

1. What are the main components, and dimensions, of a particular Living Documentary?
2. What is its organization and can it change or evolve?
3. Do such changes affect the Living Documentary's identity, and/or the identity of the systems that are related to it?
4. What stabilises, or destabilises, the Living Documentary and what would cause it to halt or die?

Summary

This chapter argued that interactive documentaries should be looked at as *relational entities*, rather than static ones. The term *relational* implies that these are dynamic systems that put in relationship heterogeneous entities (humans, machines, protocols, technology, society, culture) where all the components are interdependent. The user should therefore not be seen as *external*, but rather as *internal* to the system. It is not one object that needs to be studied, but a cloud of possibilities that depends on the possible relations between several dynamic systems: a user, an interactive structure, a database of content and a technical and cultural context.

A relational approach to interactive documentaries is only possible if *interactivity* is understood as more than a two-ways action/reaction process between the user and the computer. The two-ways approach, that has been dominant in Human Computer Interaction, is user-centric and it disregards the potential effects of the interactive exchange onto a larger system. Since this research claims that the user is not *in control* of the interactive documentary, but rather *part of* it, and *in transformation with* it, a more systemic understanding of interactivity is proposed. Interactivity, in this research, is seen as our fundamental way of being, as a way of relating to our environment and adjusting to it. This vision of interactivity is inspired by Maturana and Varela's definition of the living entity as a *unit of interactions* (1980:78). For

them a living organism is not separated from its environment but in 'structural coupling' (1987:75) with it. 'Living beings' claimed Maturana and Varela 'are characterized by their autopoietic organization' (1987:47) where *autopoiesis* is the process of self-making, or of auto-creation, and organization is 'the set of relations that must exist for the components of a system for it to be a member of a specific class' (1987:47). If life can be defined as self-organisation, adaptativity and change through interaction, then the interactive documentary can also be seen as a living entity – especially if what interest us is to concentrate on its transformational power.

This thesis proposes to look at interactive documentaries as *Living Documentaries* - digital artefacts that have levels of *liveness* (their aptitude to self-organize themselves, to adapt to their environment and to change it). Living Documentaries are defined as autopoietic *assemblages* (Deleuze and Guattari, 1975:145) that can be more or less open to transformation.

The second part of this chapter elaborated a framework in order to apply assemblage theory to the study of interactive documentaries. The difficulty was in passing from a general belief that Living Documentaries are formed from a multitude of possible relations to the practical problem of delineating clear lines of thought to investigate them. It was proposed to concentrate on specific characteristics of the Living Documentary: its organization, its structural coupling with its environment, and its external relations with other assemblages.

In order to study the organization of a Living Documentary the distinction between *components* and *dimensions* became essential. The ensemble of relations formed by, and that form, a Living Documentary has been called *dimensions*. Dimensions are ways to visualize the networked and systemic nature of the Living Documentary. *Components*, on the other hand, are the elements that are linked by dimensions. Those are heterogeneous and can be physical, digital, conceptual and cultural. Using such distinction it has been possible to formulate four questions that will be used in the following chapters, when analysing specific case studies of Living Documentaries.

The first question looks for the main components of a Living Documentary. This will allow us to see that, although all interactive documentaries have common components (for example: software, interface, user, author and digital platform) those are linked in different ways – creating, each time, a different artefact. The second question aims at identifying the type of autopoietic organization of a Living

Documentary. Depending on the levels of openness of such organization the artefact will be more or less opened to change. The third question looks at the consequences of the Living Documentary's changes for the systems that are related to it. This will be a way to assess transformation at a system level, outside of the user-computer dimension. Finally, the forth question looks at the life span of a Living Documentary, questioning what might cause it to halt, or die.

Chapter 3 - The hypertext interactive documentary through the lenses of the Living Documentary

In this chapter the analytical tools of the Living Documentary will be applied to the hypertext, or hitchhiking, mode of interactive documentary. As we have seen in chapter one, in the hypertext mode the interactive relation between the user and the documentary is based on the exploration of a finite database of audiovisual content. The components of the hypertext interactive documentary are divided in video segments which have been pre-determined by the author and stored on digital media. The user can explore those segments following a logic of hitchhiking (jumping from one segment to the other) that can have levels of pre-determination (the linking mechanism can be strictly authored or just rule based[1]).

The main case study for this section will be chosen from the several examples given in chapter one. The choice is not simple, as this mode is probably the most developed in interactive documentaries - possibly because it follows the logic used in the literary hypertexts that boomed in the late 1980's[2]. Linking audiovisual material, rather than only text, seemed a natural progression to artists and documentary makers. The famous filmmaker Chris Marker experimented with the form in 1997 with his CD-ROM *Immemory*. Even today the linking properties of the Internet make this form a well-established interactive documentary mode. Examples such as *Journey to the End of the Coal* (2008) and *The Big Issue: A Web Documentary on the Obesity Epidemic* (2009) by Honkytonk Films, *Becoming Human* (2008) by The Institute of Human Origins and *Diamond Road Online* (2008) by Kensington Communications prove that hypertext documentaries are still an established form of interactive documentary.

The *[LoveStoryProject]* (2007), by Florian Thalhofer, has been chosen as case study for hypertext interactive documentaries because its rule based organisation and linking structure is more elaborate than most other hypertexts, which are just reactive structures. The difference between a *reactive* and *interactive* structure is important

[1] Marie-Laure Ryan offers a comprehensive description of the possible structures of database narratives in *Narrative as Virtual Reality*, chapter 8 (Ryan, 2001).

[2] *Afternoon* (1987) by Michael Joyce is an early example of hypertext fiction. Conceived with Storyspace software, the user could read a text on the computer screen and jump to another screen by clicking into a hyperlink.

since only interactive structures are opened to change, meaning that the relations they forge with other assemblages impact their own form and internal logic. To clarify this point a diversion from the Living Documentary needs to be made. The evolution of digital supports (from CD-ROM to Internet), and the proliferation of software available to author interactive projects, has created sub-genres of hypertext documentaries. If the hyperlink, 'the jump, the sudden displacement of the user's position in the text' (Aarseth, 1994:60) unfolds the content of the documentary to the user, the coding that rules such jump can follow different logics. Those different logics can substantially change the nature of the resulting interactive documentary and, therefore, they need to be addressed.

Reactive and interactive hypertext documentaries

In mixing an autopoietic approach with an assemblage/systemic approach when analysing interactive documentaries as Living Documentaries, an assumption is made: that an interactive documentary can be seen as a dynamic system. In *What is interaction? Are there different types?* Hugh Dubberly, Paul Pangaro and Usman Haque explicitly take a Systems Theory approach to interaction, rather than a HCI's point of view[3]. They distinguish between static and dynamic systems[4] and then, within dynamic systems that are acting upon their environment, they distinguish 'between those that only react and those that interact—linear (open-loop) and closed-loop systems' (2009:71). Usman Haque argues that the process of clicking a fixed link (for example in a Web page) is not *interaction* but *reaction*. In *reaction* 'the transfer function (which couples input to output) is fixed; in *interaction* the transfer function is dynamic' (2009:70).

Most hypertext documentaries have a *reactive* form. In order to illustrate this it will suffice to deconstruct the interface of some specific examples and map the interactive options given by the artefact to the user. The two examples that I have

[3] For the authors, the HCI approach to human-computer interaction is coming from a first order cybernetic feedback loop logic. The person has a goal and acts to achieve it in an environment by providing an input to the computer system. The person measures the output from the system (feedback) and directs her next input by comparing the result to pursued aim (feedback loop). In a System Theory approach the person is not seen as external to human-computer interaction loop but as part of such loop (second order cybernetic approach).

[4] Where *static systems* 'cannot act and therefore has little or no meaningful effect on their environment' (2009:71), for example a chair, and *dynamic systems* 'can and do act, thus changing their relationship to their environment' (ibidem).

chosen are *Immemory* (1997) by Chris Marker and *The Big Issue: A Web Documentary on the Obesity Epidemic*[5] (2009) by Honkytonk Films. I have chosen those two examples because they are well known in their field, they are often quoted as interactive documentary "success stories" but also because they are ten years apart (proving the point that *reactive* hypertext documentaries were not just the first attempt to apply digital logics to documentary making, but that they are an established form that is actually predominant nowadays).

Immemory (1997) by Chris Marker is an early example of *reactive* hypertext documentary created for on a CD-ROM support. Chris Marker chooses an interactive media format to do something that is specifically conceived to be non-linear: mapping memories as a geographical investigation, rather than an historic one. Chris Marker wanted the user to browse through what he calls 'zones' of his memory, hoping that this exploration will serve as a trampoline to the user's personal memories.

> My working thesis was that every somewhat extensive memory is more structured than it seems - that photos taken apparently at random, postcards chosen following momentary whims, begin given a certain accumulation to sketch an itinerary, to map the imaginary land that stretches out inside of us. (Chris Marker, 1998, Immemory's CD-ROM booklet)

The map that Chris Marker has developed is divided in six zones (see Fig. 11): Le Voyage, Le Musée, La Photo, La Guerre, La Poésie and La Mémoire. Each zone contains a mix of data (photos, texts, audio files and some videos) revealed by a mouse roll-over[6]. The user can navigate through any possible path by clicking on roll-overs, and each roll-over brings the user to a fixed location. For example, if the user clicks on "La Mémoire" the CD-ROM jumps to a screen that contains a main photo, or graphic, which itself contains links to other pre-authored links. *Immemory* is therefore a *reactive* Hypertext documentary. *Reactive* because to each input of the user there is only one pre-established output, and Hypertext because the main logic of it is to navigate through a closed archive. Interactive narrative writer Marie-Laure Ryan would probably see *Immemory*'s structure as a 'network' (Fig. 12), 'a

[5] *The Big Issue* is a Web documentary by Samuel Bollendorff and Olivia Colo available at http://www.honkytonk.fr/index.php/thebigissue/.

[6] When the mouse rolls over a picture it reveals a text that can be clicked. If clicked the narrative moves to a new screen that reveals new possible links.

hypertext-style decision map allowing circuits' (2001:248), a model better suited 'for a system of analogical connections or for Dadaist/surrealist carnivalizations of meaning than for the generation of multiple stories' (2001:248). *Immemory* has a clear starting point but no clear ending. It is trying to document Chris Marker's memory by providing paths of explorations within a loose narrative.

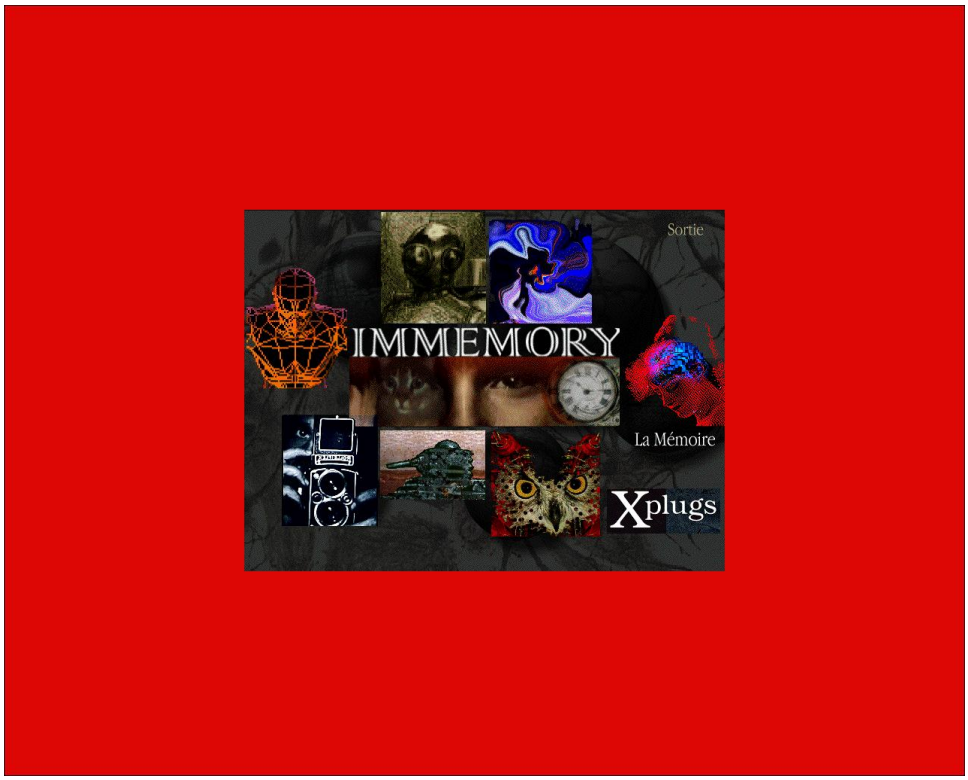

Fig. 11 - *Immemory*, main menu screen (screen grab from CD-ROM)

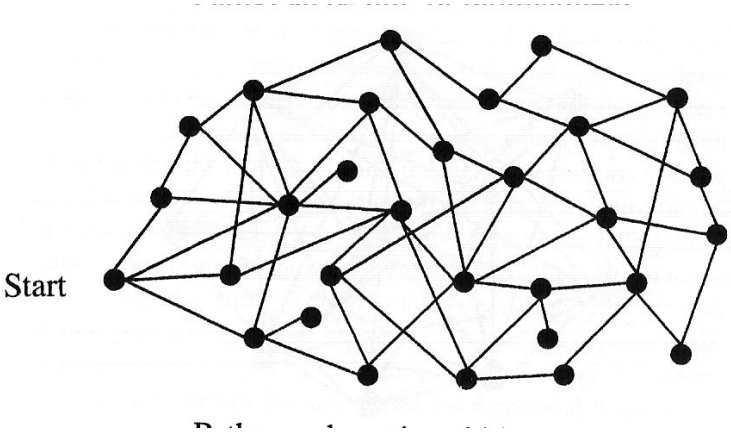

Fig. 12 - Marie-Laure Ryan's Network structure (2001:248)

More recently, French company, Honkytonk Films, has produced two Web documentaries with similar structures: *Journey to the End of the Coal*[7] (2008) and *The Big Issue: A Web Documentary on the Obesity Epidemic*[8] (2009).

In *The Big Issue* (2009), a Web documentary about obesity in Europe and America, the user is given the role of an investigator that has to browse through a tree of possible paths. Here again the type of relation between the user and the piece is of a reactive type. After having seen the title sequence the user finds herself in a surgical operation room. A part from reading some extra information about bariatric[9] surgery the choices of the user are quite clear: 1. "wait for the end of the surgery to talk to the surgeon", 2. "try to meet some other partners" (Fig. 13). Each of those choices, if clicked, will lead to a specific new part of the investigation and will eventually cover most of the journey that the authors had planned for the user.

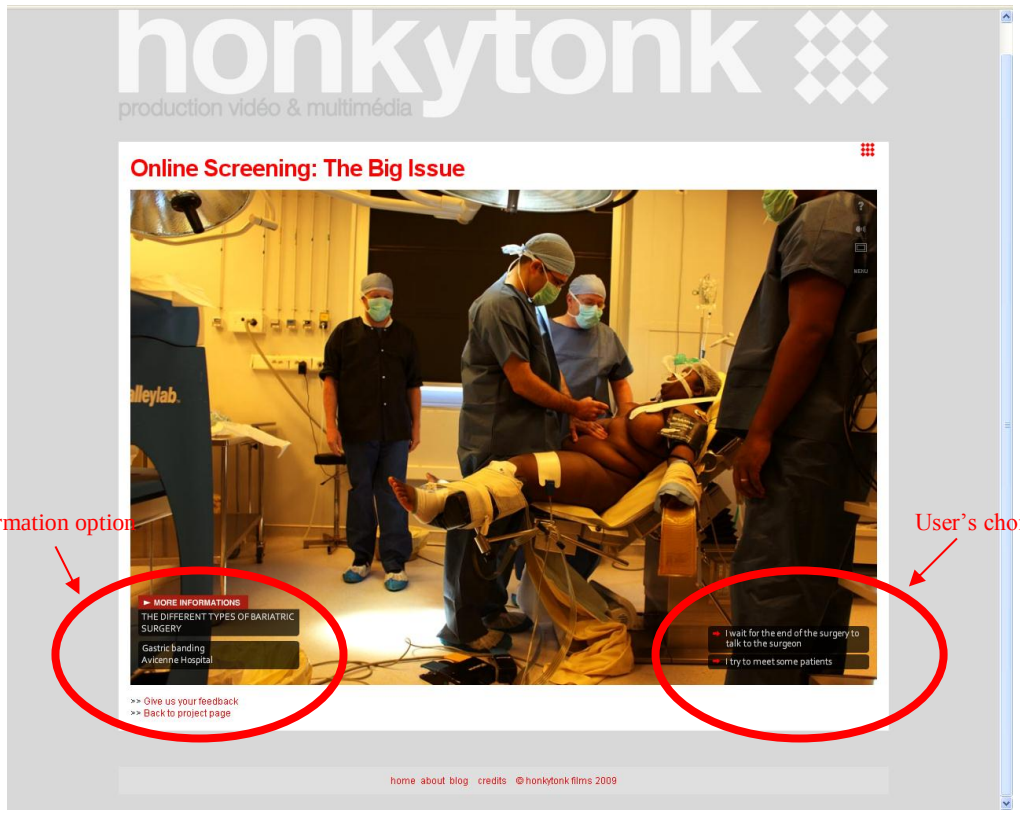

Fig. 13 - First choice screen of the Big Issue (http://www.honkytonk.fr/index.php/thebigissue/)
Note that the red circles, arrows and texts are my own annotations. They indicate choice options for the user.

[7] *Journey to the end of the coal* is available online at http://www.honkytonk.fr/index.php/webdoc/. Accessed 22.03.10.
[8] *The Big Issue* is a Web documentary by Samuel Bollendorff and Olivia Colo available at http://www.honkytonk.fr/index.php/thebigissue/. Accessed 22.03.10.
[9] Bariatric surgeries are performed on the stomach and/or intestines to help people with extreme obesity to lose weight.

The structure of *Big Issue* (which is very similar to *Journey to the End of the Coal*) is what Marie-Laure Ryan would describe as a 'directed network', or 'flowchart', (2001:252) (Fig. 14) where the user's journey starts at a fix point and then is led by few choices meant to lead to a resolution of the story. As Gareth Rees observes 'the merging narratives keep[s] the story on a single track while offering [the user] an illusion of choice' (as quoted by Ryan, 2001:252).

In the terminology that I am proposing in this research both *Big Issue* and *Journey to the End of the Coal* are hypertext documentaries with *reactive* interactivity, since to the input of the user the system re-acts delivering pre-established paths.

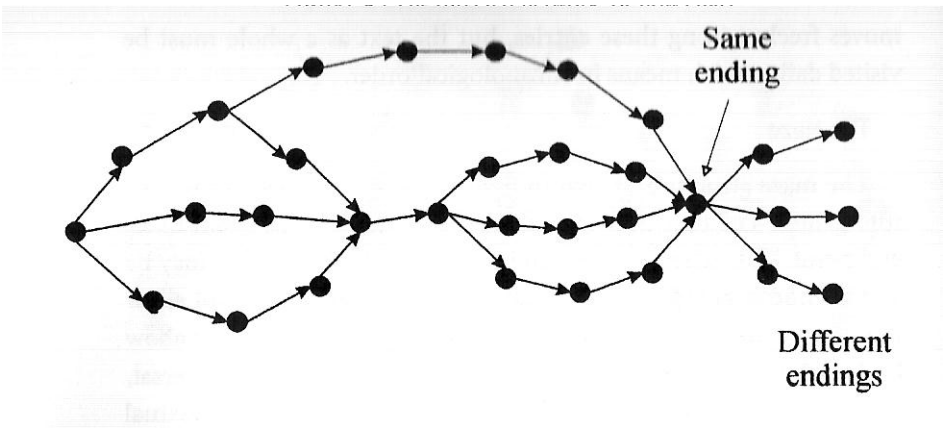

Fig. 14 - Marie-Laure Ryan's diagram of the structure of a directed network, or flowchart (2001:252)

The *reactive* nature of a hypertext documentary is only linked to the way its hyperlinks are coded. The fact that one input generates only one output allows the author to control the interactive narrativity of its artefact. In *Narrative as Virtual Reality,* Marie-Laure Ryan has distinguished between ten possible structures of interactive narrativity. But if the linking logic is not *reactive* but *interactive* (in the sense of not pre-determined and generated in real-time) then the structure of the artefact might vary every time it is accessed by the user.

Effectively the branching options given by the narrative structure can be more or less complex, they can lead to multiple ends or to a single ending, but essentially they are possible routes between a pre-established structure. The level of 'reactivity' for the user will go from the simple choice of going ahead or stopping the exploration (to click or not to click) to more elaborated choices that will demand rational thinking (in the case of an investigation) or just mere curiosity (in the case of the *Immemory*).

A pre-established linking structure (*Big Issue*, *Immemory*, *Journey to the end of the Coal*) assumes that the author accepts to have the control of the possible branching narratives, while a generative linking structure assumes that the author does not want to build a tree of possible narratives but just to build associative logics between families of topics or data. This second option is what interests new media documentary maker Florian Thalhofer. When authoring an interactive documentary, Thalhofer wants to depict a world where 'nothing too unexpected will happen but where I still do not exactly know what will happen'[10].

The case study that will be analysed in the next sub-chapter is Florian Thalhofer's *[LoveStoryProject]* (2007): an *interactive* hypertext documentary - if one wants to follow Hugh Dubberly, Paul Pangaro and Usman Haque's terminology. This means that to the clicking input of the user, the system will generate an output that is not totally pre-defined. Since the links self-generate themselves in real time (within a set of finished possibilities), the *[LoveStoryProject]* (2007) has a higher level of autopoietic (self-making) behaviour than reactive hypertext interactive documentaries. This is the reason it has been chosen as a main case study of hypertext Living Documentary.

[10] From a private interview held in London on the 15.01.10.

The *[LoveStoryProject]* – a case study of hypertext mode

The *[LoveStoryProject]* is a database narrative that is accessible through the Internet[11]. For five years (2003-2007) Florian Thalhofer interviewed people from around the world on their views about love. The project started in Cairo in 2003 and slowly moved through Singapore, Dublin, New York and Berlin. People were asked to expand on their definition of love, on their first kiss, on their hopes and fears and more generally on their experience of love. These interviews were then edited down as single topic grabs, devised into SNUs (Smallest Narrative Unit)[12] and then linked through a set of rules using the open source software Korsakow 5[13].

> The Korsakow System (pronounced 'KOR-SA-KOV') is an easy-to-use computer program for the creation of database films. It was invented by Florian Thalhofer, a Berlin-based media artist. Korsakow Films are films with a twist: They are interactive – the viewer has influence on the K-Film. They are rule-based – K-Films are generative – the order of the scenes is calculated while viewing. (From Korsakov's website, available at http://korsakow.org/about, accessed 10.03.10)

As an author Florian does not want to pre-determine the choices of his audience, he wants to imagine a world of possibilities:

> The links are rule based. If you decide on fixed links they create a map that is a fix tree structure, which ultimately is linear. If you link by rules you create a multi-dimensional movie. You walk from one cloud to another and as an author you do not know where exactly in this cloud you are going to be. I do not decide on the order of things but on how groups of videos are linked to each other… and this is a different way to see the world. (From a recorded conversation with Florian Thalhofer held in London, 15.01.10)

[11] The *[LoveStoryProject]* has also been shown in an art gallery installation context. In this research though I will concentrate on the Internet version of the project because there is no archive material of its installation form, and the Internet version is by far more accessible to its users.

[12] Korsakow turns media assets (video files) into Smallest Narrative Units (SNUs). This involves making rule-based associations between all the media assets in the project, using two kinds of keywords: IN ("I am…" keywords) and OUT ("Looking for…") keywords. A K-Film (Korsakow-film) will only 'work' if there are multiple SNUs with keywords in common. The keywords are derived by the author, based on the content or meaning of each SNU. Where keywords coincide, links are made (edited text taken from Korsakow's tutorial at http://korsakow.org/learn/quick-start).

[13] Korsakow is open source software conceived, and originally coded, by Florian Thalhofer himself that is downloadable from http://korsakow.org/, accessed 12.09.2010.

Korsakow, with which the documentary has been authored, links families of videos by rules (for example: “link to any video containing the word kiss” or “link to an interview of a woman”) which means that its author organizes the logic of linking but does not know which precise video segment will be proposed by the software to the user. This element of unpredictability adds a level of openness but the fundamental logic of the relation between the user and the content is still, as seen in chapter one, that the database is limited and not expandable by the user, the logic of interactivity is inspired by Turner’s algorithmic computation, the role of the user is mainly to explore the database and the role of the author is to create possible paths within a closed database. While the user browses videos the assemblage user-interface-machine-server-database-video keeps re-forming itself depending on the paths that are being opened. The logic of construction of such paths can change, and depend from the type of coding used, but since the database is closed and the user is mainly browsing it I will consider it a hypertext interactive documentary (if the user had been able to change the linking rules, or directly add to the database it would have come under the participative mode).

The *[LoveStoryProject]* as a dynamic interactive hypertext Living Documentary

For the user the *[LoveStoryProject]* opens in a webpage without the need of a particular plugin. Once the user has clicked on the title, a first video appears on a main window and soon after five little visual hyperlinks appear at the bottom of the window. Each image is the still photo of a character. Quite intuitively if the user clicks on such image she will jump to the interview with that character. When the mouse rolls over the hyperlinks text appears. Those are key words such as “kiss”, “fist love”, “love again” etc… which are indicative of the topic that the character will discuss in her grab (Fig. 15).

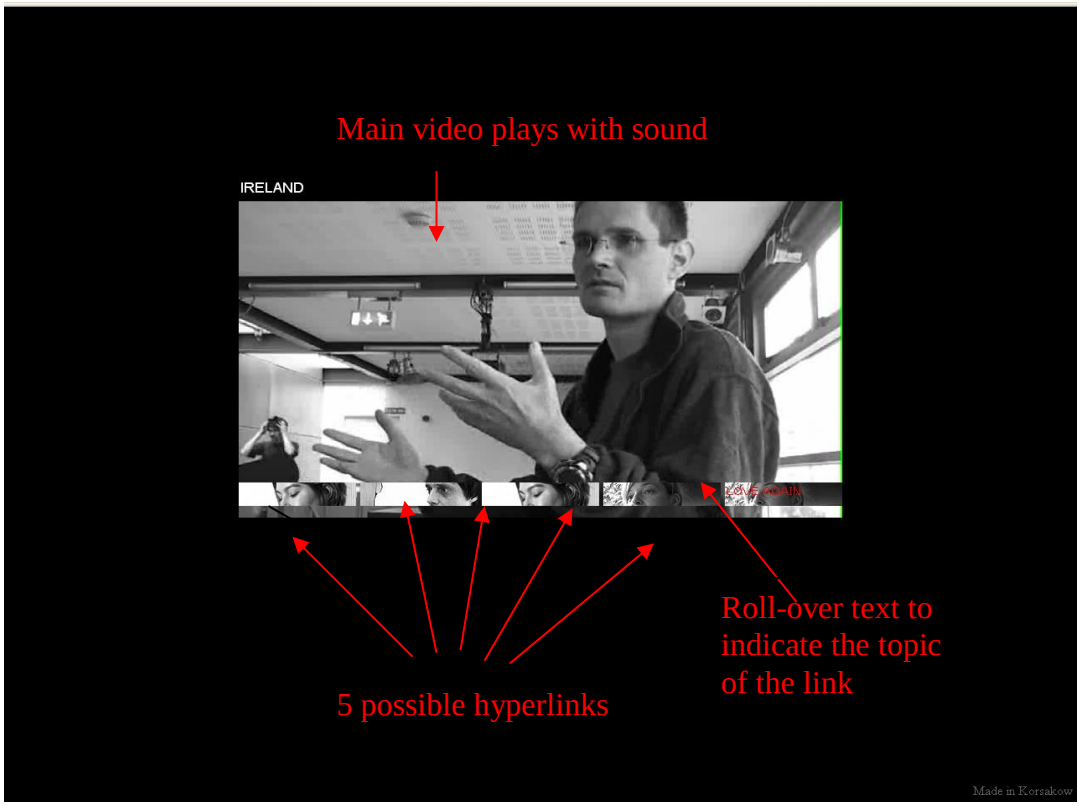

Fig. 15 - The *[LoveStoryProject]*, screen of one interview highlighting the possible links.
Note that the red arrows and texts are my own annotations. They indicate choice options for the user.

The structure of *[LoveStoryProject]* starts as a tree structure, very similar in fact to any other hypertext documentary, but with the particularity that the links are generated on the fly. So although the number of options are predictable (five or less) the actual interview grabs that will appear are not, and since those options will themselves generate other 5 options it is impossible to fit *[LoveStoryProject]* into one of Marie-Laure Ryan's structures, as it could change every time. Here below is my attempt to graphically represent the *[LoveStoryProject]*'s structure (Fig.16):

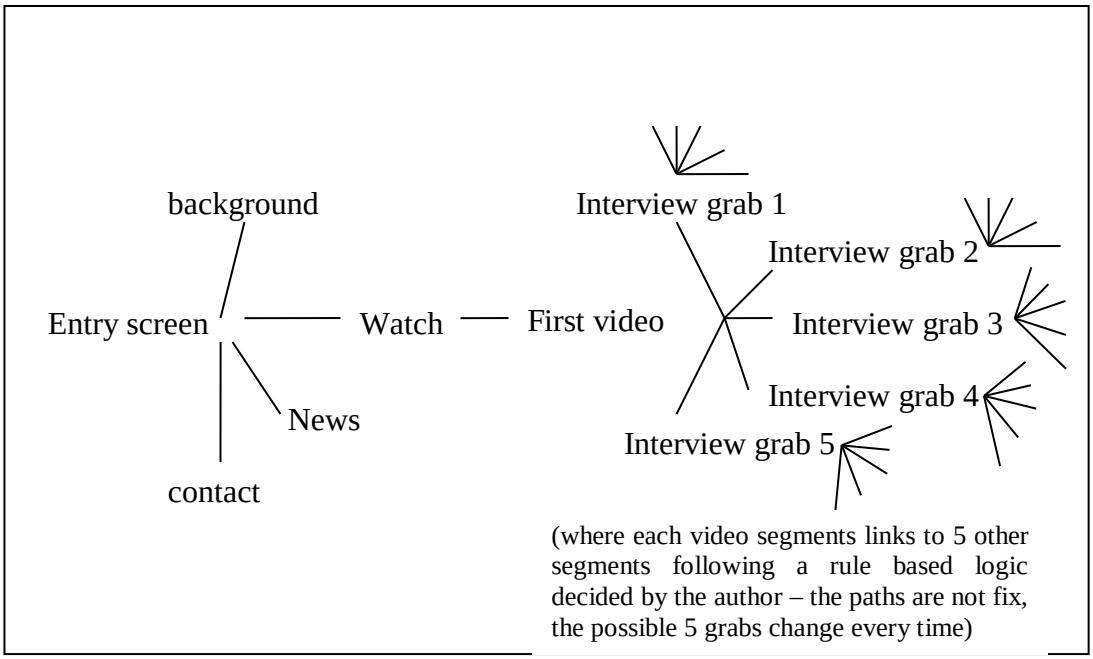

Fig. 16 - Narrative path and linking logic of the *[LoveStoryProject]*

Thalhofer describes his project as 'an evolving and dynamic documentary-film. A film that never is the same twice' (Thalhofer, http://www.lovestoryproject.com/). But what is "dynamic" about it? What does it means that it is "evolving"? For Thalhofer the film is dynamic because the rendering of the linking mechanism will produce a different path for every user each time it is used because he, the author, can always decide to add more interviews if he wants the database to grow.

From this we could argue that his project is an interactive (not reactive) dynamic (that influences its environment) Living Documentary, but not an "evolving" one – in the sense that it only evolves if its author adds content, but cannot evolve via the interaction with its users and network. From an ontological point of view, this means that the reality it portrays is a predetermined one where there is no space for novelty to emerge. To test this hypothesis we will use the Living Documentary approach, as it allows us to see the levels of transformation of the artefact and of its related systems. We will therefore use the following lines of enquiry:

1. What are the main components and dimensions of the *[LoveStoryProject]*?
2. What is its organization and can it change or evolve?
3. Do such changes affect its identity, and the identity of the systems that are related to it?
4. What stabilises or destabilises it, and what would cause the system to halt or die?

1. What are the main components and dimensions of the *[LoveStoryProject]*?

As seen in chapter two, *dimensions* are a network of relations (which can be of any sort) that links the components that make the Living Documentary possible, and *components* are the elements that form the Living Documentary and that acquire sense and function depending on the dimension that contains them. Different components link to each other into a unique way and create the specificities of the *[LoveStoryProject]*.

The video segments are not enough to create this piece, nor is its interface. Their sum is not the *[LoveStoryProject]*. The digital artefact is the result of a concomitance of heterogeneous components: user choices (emotions, interests, background, computer literacy etc…), technical feasibilities (Korsakow coding, Internet protocol, server functionality, delivery bandwidth, socio-geographical positioning of the user etc…), author intentionality (what were the "in" and "out" coded for each segment, the aesthetics of the piece, the choice of interviewees… etc). A different balance of any of those components, and of any of the components that constitute them, would produce different projects.

The shift that the Living Documentary allows us to do is to re-unify the entities that are normally seen as independent (the author, the user, the database etc…) and to unify them through lines of determination – meaning assemblages that create the Living Documentary. Using the Living Documentary's approach we can now consider the author as part of the project, and not as antecedent to it. In the same way, the user becomes part of the project, and not someone who comes after its creation. While the *[LoveStoryProject]* is played, all its sub-assemblages are being re-defined through the playing. Like a set of marbles launched on the floor, they form new collisions and new shapes. The author and the user are both being re-defined by their action/reaction interplay and, while this is happening, new sub-assemblages are being created. But, if the *[LoveStoryProject]* is an heterogeneous assemblage how can we distinguish between "marginal" and "main" dimensions?

In the following section we will explore the most significant components and dimensions that form the *[LoveStoryProject]*'s assemblage. As I am part of the *[LoveStoryProject]* Living Documentary myself (as a participant and a writer) I am not claiming an outsider's "neutral" point of view. Actually: I am willingly

embracing my partiality and select the dimensions that have emerged to me. Since it is only through the user-machine interaction that the *[LoveStoryProject]* takes form, it can only be described through a first person point of view. Therefore, the logic that I will use is the following one: I will isolate the dominant components that emerged though my own encounter with the *[LoveStoryProject]* and then see which possible dimensions of analysis can derive from such components. From there it will be easier to establish the nature of the *[LoveStoryProject]*'s organization.

1. the code

Without code, intended as the source code that allows software to run, there is no *[LoveStoryProject]*. The *[LoveStoryProject]* is authored and created with Korsakow software. Korsakow projects are stored on a server and findable through a Web search engine. They open through a browser and run with a Flash player. Code is therefore a determinant component of the *[LoveStoryProject]* and it depends on another code, the one of the Korsakow software.

1.1. Korsakow software

This component effectively structures the organisation of the project: it structures what the user is allowed to do, and how the internal elements of the piece are linked together. But Korsakow itself has a structure and a way of linking its elements: the author will be able to push its structure and, at the same time, she will be constrained by its affordances. As any software, Korsakow depends on other software - its Java scripting, the open source coders that will change it, its interface, its platform and browsers compatibility - it is itself a dynamic complex system. The *[LoveStoryProject]*'s code is therefore related to Korsakow software that is itself related to other supporting software.

1.2. supporting software

Korsakow runs on the Internet, and therefore is subject to Internet protocols. It also needs a Flash Player which means that the viewing of a Korsakow project is subject to a long list of technical compatibilities and that any problem or glitch into such code chain can change, or interrupt, the viewing of the documentary itself. As a Living Documentary the *[LoveStoryProject]* is

dependent on the temporal configuration and fitting of all its elements. The software dimension has levels of complexities that will determine the *[LoveStoryProject]*'s functioning and its interface.

2. the interface

Korsakow has its own interface[14], this interface influences the authors that use it by presenting forward certain possibilities more than others. Korsakow influences the interface of the final documentary project itself – for example it assumes that the main video is always played into a central frame and that text or image links will be on the side of the main frame[15]. The interface is not a frame; it is part of the artefact itself. It dictates 'a particular configuration of space, time, and surface articulated in the work; a particular sequence of the user's activities over time in interacting with the work; a particular formal, material and phenomenological user experience' (Manovich, 2001:66). A different interface means a different project.

The interface of the *[LoveStoryProject]* can also be seen as a cultural interface 'largely made up from elements of other, already familiar forms' (Manovich, 2001:71). The idea of the main screen comes from the cinema screen, while the hyperlinks come from a well-established multi-media language. This cultural interface is easy to understand – allowing a certain fluidity of browsing – but also locks authors and users into an established language and aesthetic. The interface dimension offers fluidity of browsing, but also cultural constraints, to the *[LoveStoryProject]*'s user. It creates a visual language where only one video can be played at a time. This video is dominant in size, and is the only one that plays sound. New video clips available for viewing by the user are represented by photographic icons, and by roll-over texts. The simplicity of this interface makes browsing easy for the user but it may also frustrate by limiting her choices to a fix number of hyperlinks. The interface creates meaning by offering, and limiting, choices.

[14] Interface is here understood as 'the way you accomplish tasks with a product – what you can do and how it responds' (Raskin, 2000:2).

[15] Korsakow allows a certain flexibility in the final interface and projects such as *The Way I Saw it* (2007, by Paul Juricic), *Fragments* (2009, Adrian Miles), *Forgotten Flags* (2006, by Florian Thalhofer), *The [LoveStoryProject]* (2003-7, by Florian Thalhofer) or *Rehearsing Reality* (2007, by Nina Simoes) do all look slightly different, but they all work around the same idea: one central window allows the user to watch the main video, and around this window several hypertexts, or hypervideos, link to the next video segment.

3. the copyright

The legal dimension of Korsakow also determines how it will be used in the future: it influences who the users will be. Korsakow version 5.0 is a free open source software, and is made publicly available under the GNU, General Public License. This means that the software is open to change and that it will transform itself. Future Korsakow projects might look very different from today's projects. This might create problems of compatibility and re-formatting. Creators who do not update their projects might be at risk of seeing their Korsakow films becoming "second rate" projects, or just "too simple". On the other hand, first generation Korsakow projects might be seen as "classics" in a near future. The potential development of open source Korsakow means that the watching conditions, and stylistic references, of actual Korsakow projects will change over time. This will directly impact in the popularity, and potential life-spam, of each Korsakow film.

The fact that Korskow is open source has an impact on the profile of creators it attracts (typically these are students, artists and media activists) and thus, on the kind of projects which are created with the application.

4. the platform

Korsakow projects are most usually viewed on the World Wide Web. This implies Internet access and high bandwidth, but also computer literacy, server stability and protocol regulation. The platform dimension of the *[LoveStoryProject]* rules its physical accessibility but also the type of people that will be exposed to it. Here social-economical dimensions of computer accessibility, technical dimensions of signal compatibility and legal dimensions of protocol respect are interlinked. If the *[LoveStoryProject]* keeps freezing, or stumbling, because of poor Internet bandwidth, its viewing will be interrupted. For other people, that do not have access to the Internet network, the *[LoveStoryProject]* is simply not materializing itself.

5. the media

A Korsakow project can be photo based, text based or video based – or all of those mixed together - and each of those media comes with a background of syntaxes and media praxis knowledge. *2012 (and all that)* (Mél Hogan, 2010), a Korsakow project made exclusively with words with only two letters as hyperlinks, is radically

different from *Fragments* (Adrian Miles, 2009), a Korsakow project based on video segments with as many as ten photo hyperlinks to choose from per screen. While this is not the place to discuss such a vast topic as multi-media aesthetics, it is nonetheless useful to cite what media theorist Lev Manovich says about new media artefacts. In new media artefacts 'the two sources connected through an hyperlink have equal weight; neither one dominates the other' (Manovich, 2001:76) thus hyperlinked artefacts 'can be correlated with contemporary culture's suspicion of all hierarchies, and preference for the aesthetics of collage in which radically different sources are brought together within a singular object' (ibidem).

The media here is not only the media modalities contained by the project but also the media that supports the project itself. The *[LoveStoryProject]* is accessible via a computer. The language, the location, the single-viewer/group-viewer, the active/passive etc… dimensions of the *[LoveStoryProject]* experience are themselves related to such media.

Florian Thalhofer has presented the *[LoveStoryProject]* in art galleries[16], where the presence of the computer was less intrusive, and group viewing, rather than single user, was the norm… this other materialization of the *[LoveStoryProject]* possibly makes it "a different project", although its video content is the same.

6. authoring

We have seen above that the author's role may not be the dominant one: that she can be considered as one of the elements that shapes the digital artefact, especially when considered in relation to other components such as "code" and "software". The author decides the content of the database and the software that will manage it. She also edits the video segments and decides the length of the Small Narrative Units (SNUs) and their IN and OUT keywords – that generate the linking. As author, Florian Thalhofer is the only one that can add new video segments to the *[LoveStoryProject]*. From his point of view this guarantees some narrative and quality continuity. As he told me in a recorded conversation, "I am interested in a system where an author can build something. I am a real believer in the author because an author has interesting view points on things"[17]. So Thalhofer does not really want to convey a message to his audience, but more a point of view, a way to

[16] See http://www.lovestoryproject.com/ for more up to date details. Accessed 28.03.10.
[17] Personal interview with Florian Thalhofer, London 15.01.10.

see things. He does so by fixing the rules by which the scenes relate to each other, so he purposely does not create fixed paths. In dynamic new media artworks 'the initial data supplied by the programmer acts as a genotype that is expanded into a full phenotype by the computer.[…] the content of the artwork is the result of […] a collaboration between the artist/programmer, the computer program, and the user' (Manovich, 2001:67). The author sets up the initial conditions, and the logic that the program will have to follow, he shapes the logic but not the final form of the *[LoveStoryProject]*. This means that even in a mode of interactive documentary such as the hypertext one – where the authorial figure is quite dominant - software takes on board a big part of the authorial decisions, sometimes actualizing the author's principles or rules, and sometimes calculating new routes for the user/participant.

7. the interactor

Who is the interactor in the *[LoveStoryProject]* and what does she do? The interactor is the person/entity who, by interacting with the digital artefact, allows it to change into a new form. In this case, the user has to click on a picture to start the process of link generation and move to the next video – whatever is the user's reason for making this selection, the program transforms the click into a direction and thus participates in the change. Only when the click happens Korsakow can generate a specific link – out of all the possible ones derived by the set of rules coded by the author – which will flag a new main video with a new selection of possible links to take the story further. If the user does not click on anything, the video on the main window will reach its end and normally fade to black. If the user makes no choice, the documentary stays still and stops. Seen from an author-centric point of view the user only activates a pre-conceived masterplan. Seen from a user-centric point of view, the user is the raison d'être of the project - the one for whom the project was made and the one who needs to be engaged by the project. But seen from the documentary point of view, the user is the co-player, the collaborator who allows the documentary to emerge and to flourish. Until the user acts on it, the *[LoveStoryProject]* remains a potential Living Documentary sitting on a server. When the user watches, listen and clicks, the *[LoveStoryProject]* takes shapes. The interaction between the two is more on the level of game-play than of communication, as it is rule based rather than linguistically based. The user is well aware that the number or "answers" from the computer are limited (as opposed to the

feeling of a conversation where the range of answers appears to be limitless). In the *[LoveStoryProject]*, the interface clearly establishes that at each stage there will be a maximum of five possible "answers" from the computer/software/content/author (see the "the interface" section). Once this rule is understood, and accepted by the user, the collaborator/players can start their encounter. But the *[LoveStoryProject]* is not a game narrative – it has no aim and no winners - it only retains the rhythm of a game, the sending back and forward the ball and the feeling that one needs the other to continue, and yet both players have the power of stopping the game. In the Living Documentary that the *[LoveStoryProject]* is, the interactor is a component that links all the others by starting the action and creating a dynamic motion.

The code too can be seen as an interactor: if it doesn't consciously choose between options, it is the one that makes computing possible outcomes possible.

8. the subject

The subject is the component that is often referred to as "content". The people who have been interviewed for the *[LoveStoryProject]* have no control on how their interviews have been placed into a new media interface and disseminated onto the Web. When interviewed they were "the observed" ones. And yet, anything they said that Florian Thalhofer found interesting has been used to contribute to what the *[LoveStoryProject]* really is: a container of points of view about love. So far, as in any linear documentary, the interviews are what make the film interesting within a framework given by the author. But, since the *[LoveStoryProject]* is an interactive documentary, the participant can now also be considered a user. From her point of view she passes from a first level observer to a third level observer (she observes what her observer has observed). Also she now becomes an en-actor, as she is part of the system that she is observing. Potentially, as a user, she can re-shape the form that contains her. This recursive loop uses the participant's outputs (the interview clips) as an input for her viewing of the *[LoveStoryProject]*. This process is typical of autopoietic entities, but it normally happens in consecutive time[18]. In the *[LoveStoryProject]* the subject/user mixes an input and an output that happened in different times and locations. The participant dimension is no longer a fixed object

[18] While trying to reach a glass of water my hand is continually informed by my eyes of the distance from the glass (negative feed-back) and this input guides my output in such a way that I eventually smoothly grasp the glass.

called “content”, but a space of recursivity that mixes input and output to create the *[LoveStoryProject]* in real time.

The eight components that have been described so far are interlinked and create different dimensions, depending on our chosen point of view. Components are themselves dimensions when one zooms inside them (as they are themselves composed of other components). Each dimension can become part of another one, and one could zoom out from the Living Documentary itself to see how it links to its immediate, or remote, environment. The same chain of connections can also be followed on the opposite direction: zooming inside the Living Documentary to see its internal organization. The next section will concentrate exactly on this: on the organization of the *[LoveStoryProject]*.

2. The *[LoveStoryProject]*’s organization

Maturana and Varela define the organization of a living entity as ‘[t]hose relations that must exist among the components of a system for it to be a member of a specific class’ (1987:47). At the start of this chapter, we identified the *[LoveStoryProject]* as part of a specific class of interactive documentaries: the hypertext one. Its organization is such that each sequence is linked to another by a simple algorithm and that its database is closed. This is what makes it part of “a specific class”. But, within the class of hypertext documentaries each artefact is different. The relations that make the *[LoveStoryProject]* what it is are linked to the dimensions that compose it and that link it to other assemblages. Here the dimension of code-Korsakow-platform-media is based on a system of relationships between video segments that is dictated by the “in” and “out” rules that link the SNUs. Those rules, which are specific to the *[LoveStoryProject]*, because they have been coded by Florian Thalhofer for this project only, are like a behavioural code of conduct of this Living Documentary: if this, then go there, if that then do not do anything. Those rules are themselves limited by what Korsakow can and cannot do. We have here a double loop of constraints: the *[LoveStoryProject]* can be what its author has allowed it to become, within the constraint of what its digital materiality allows it to do. The political forces that are made visible by the *[LoveStoryProject]* are the effects of structure, materiality and power on our lives. Participation and agency are

possible in the *[LoveStoryProject]* but they are kept at a low level, a level that makes the structure and interface so overwhelmingly visible that the user feels like an observer rather than an actor-participant.

If we want to zoom out of the *[LoveStoryProject]*, and consider its relationships with its environment, we need to be clearer in what is meant by "environment". The common understanding is strictly dualist: that "environment" is synonymous with externality. We can however take a radically different approach, following Varela's 'middle way', by which the world is enacted[19] by our history of structural coupling and 'organism and environment enfold into each other and unfold into one other in the fundamental circularity that is life itself' (1993:217). This absence of clear boundaries between in/out also fits with Deleuze, Guattari and DeLanda's assemblage theory, insomuch that each assemblage is constantly linked with other ones.

When the user (who, if one takes the documentary's point of view, is part of the environment) clicks on a link (which is part of the documentary entity) the effect is both on the user (who discovers a new part of the story) and also on the documentary itself (in that it materialises into one of its possible forms). The circularity of this motion is very clear in the *[LoveStoryProject]*: when clicking on a hyperlink I jump to a new interview and I see new links unfolding on the screen. For me, the user, the story has moved on, my curiosity is new, my emotions follow my interest in the interview that I am discovering. But, for the documentary, the impact of the click has been a jump, the resolution of a coding algorithm, the firing of a new audio-visual file and the re-organization of the next possibilities available from this point. At each click the *[LoveStoryProject]* re-forms itself as a result of a mutual co-emergence of new forms for both the user and the documentary. This co-emergence is typical of the Living Documentary as it happens in real time and shows elements of "aliveness" (in the sense of being alive and of being in movement/action).

The system is dynamic in itself, but static in its relationship with the environment, in the sense that a video can be added, but it will disrupt neither the goals nor the functioning of the project. Its organization does not permit it to be independent from

[19] Perception has been defined as 'embodied' and 'enacted' by Varela, Thompson and Rosch (1993:173). By doing so they put the emphasis on a dialectic vision of perception that supposes that our materiality (embodied sensory and motor processes) our psychology and our cultural identity are in constant inter-*action* between themselves. Embodied refers to the fact that experience necessitate having a body and that the sensory and motor processes of this body depends on 'biological, psychological and cultural contexts' (ibidem).

its author. Since the user can neither add content to the database of videos that form the artefact, nor change the rules that generate links, the organisation of the *[LoveStoryProject]* appears to be closed. At each click the *[LoveStoryProject]* re-structures itself, but no click can take it beyond the set of possibilities that characterize its organisation.

What are the implications of having a Living Documentary that cannot change its own organisation? The *[LoveStoryProject]* portrays a vision of life as multiple and in movement. The interactor always has several possibilities to choose from, and each leads to something else. So the role of the individual is of choice, interpretation and exploration, but what she cannot do is to change the rules of the system. There seems to be freedom of exploration but no freedom of action.

This conclusion would probably be shocking to Florian Thalhofer, as his whole concept is to put the user in front of a non-directive piece, where it is the individual that understand what she wants and where the author offers choices rather than certainties. Could it be then, that although the *[LoveStoryProject]* is organizationally closed the user can have a feeling of openness? Could there be other consequences to the "click" of the user than just jumping within videos stored in a database? The next section will see how different levels of what is meant by "actions" can change the ontological role of the *[LoveStoryProject]*.

3. Do changes affect the identity of the *[LoveStoryProject]* and the identity of the systems that are related to it?

Whatever the original intention of the author, and whatever the piece was originally intended to be, do, and mean, our starting point will be the logic of interactivity that sustains it. Typically in media analysis, the author's intentions and the original meaning are given disproportionate weight. In this thesis it is not video or audio content per se that will be central, but how the production and consumption of such content creates 'complexes of subjectivation' (Guattari, 1995:7) and co-emergent identities. For Guattari 'complexes of subjectivation' are the result of 'multiple exchanges between individual-group-machine' (1995:7). Subjectivity 'does not only produce itself through the psychogenetic stages of psychoanalysis or the "mathemes" of the Unconscious, but also in the large-scale social machines of language and the mass media – which cannot be described as human' (1995:9). The interdependence

between human subjectivity and mass media machines, such as the computer and the Living Documentary, is what concerns us.

In a similar line, although in a more human-centric way, when Jonathan Dovey and Helen W. Kennedy analyse digital games they remind us that 'understanding subjectivity becomes a matter of understanding people's individual relation to technics as much as understanding geographies, class, race, gender, age or sexuality' (2007:1) and they opt for 'a view of subjectivity that challenges the notions of a fixed or stable identity by starting from the idea of an always relational and always situated self' (2007:6). What is claimed in this research is that if identity is always relational, and interaction is co-constitutive, then the identities that are co-created in interactive documentaries are multiple and they include the interactive documentary itself and all the subjects that are in contact with it.

The interactive documentary might not have a subjectivity (because it does not have a conscious self) but it has an identity and a point of view (even if it is a non-conscious one). For psychiatrist David Galin any dynamic system (even a non-conscious one) has a point of view, which is to be understood as 'the total set of possible discriminations an entity can make in its present state and context' (1999:225). The point of view depends on the properties of the entity[20], its materiality (what it is made of, its technical support, its structuring code, the media that it supports), its organization, and the time, place and context of the entity. The code that links the *[LoveStoryProject]*'s Small Narrative Units dictates the possible set of options that the entity *[LoveStoryProject]* has at any present state and context. The fact that those links are not pre-defined means that the artefact an identity that keeps changing at every click of the user, and yet maintains its organisation. This is the base of the circular autopoietic relationship: the user affects the artefact, the artefact adjusts to those changes and reshapes itself demanding a new adjustment of the user's point of view. They are both acting as self-regulating and self-making systems and yet they are in constant relationship with each other.

One might ask what is the effect of the relation between subjectivity and the linking action of the user?

[20] Where "entity" is a unit, a wholeness, a kind of form. Galin defines an entity as 'a group of bits or elements distinguished from those in its environment by 'belonging to each other' in some sense' (1999:224).

When the *[LoveStoryProject]* begins, a title sequence starts in the main video window and five portrait-hyperlinks appear on the bottom of the screen. How do I choose between the five options that are on the screen? My first instinct is to go for a face that interests me. Am I going for the Muslim looking woman, the gay-looking girl, the blond woman, the guy with glasses or for the handsome looking guy? Do I select on the basis of the person's appearance, religion or the sexual orientation? Those choices are not conscious at the time of interaction; all I notice is that my hand tends to bring the mouse over the type of person that I would want to talk to socially. But when my mouse rolls over the picture of the selected person a text appears. My rational side takes over. I now read that under the Muslim woman a text says "falling in love", while the gay-looking girl has "love again" and the handsome guy has "freedom". My mind does a series of quick associations. My instinctive tendency to go for the handsome guy is now diminished by the fact that I assume he will speak about the fact that he does not want any serious love story because he wants to be free (hence the text "freedom"). Suddenly the Muslim woman, who had not interested me at first, gains my attention. If she is going to speak about "falling in love", and she does so from a Muslim point of view, it might be interesting. I click on her. Her video clip starts playing on the main video window. She is talking about her first love but does so in a non-religious way. I am somehow disappointed; I was hoping to have an insight into some other culture than mine. While still listening to her I suddenly decide to get out of this video by clicking into one of the five hyperlinks that have now appeared on bottom of the screen.

How have those two minutes of exploration of the *[LoveStoryProject]* affected me and the project itself? My effect on the artefact is clear: following my two clicks, the project has re-structured itself twice. Not only it has generated two of its possible facets, but those facets have generated its next possible forms.

And what about me, the user? How has the *[LoveStoryProject]* affected me?

While watching the *[LoveStoryProject]* I was very conscious that the piece was depending on me making choices. This position has 'resignularised' me, as Guattari would say (1995:7). Each click is a choice that defines me: what attracted me to the handsome guy? Why did I assume that he would speak about not wanting a stable relationship with a woman? After all, the "freedom" rollover could as well have lead him to explain how much he feels free in his serious and long term relationship. Why did I decide that a religious take on love would be interesting? What does all this say

about me? At each of those decision points I have positioned myself as "a woman who is attracted by a handsome guy", as "a woman that does not trust a handsome man's willingness to commit in an emotional relationship" and as a "woman who is interested in cultural diversity". I am obviously all of these women. I have quickly passed through each of those "versions of me" and eventually, by clicking on the Muslim lady, I have positioned myself as "a woman who, at this precise juncture, prefers cultural differences to handsome men". I will probably click on the handsome man the next time I encounter him, without even reading his roll-over (the *[LoveStoryProject]*'s simple interface allows me to click on a face without reading the text: if I click quickly, the text does not have the time to appear). There is here a constant play between a cognitive choice (the click on a text that depends on the meaning of the text) and the affective ('the pre-individual bodily forces augmenting or diminishing a body's capacity to act'; Clough, 2008:1). This is one of the elements that makes the *[LoveStoryProject]* such an interesting project. The fluidity of its experience depends on the fact that as a user I can constantly follow both my affective and rational side. I have the power to cut people in the middle of their sentence and to jump to someone else who, in that moment, seems more interesting to me. I have the power to stop, to choose, to cut. What are the implications of such power? I am not listening to people's ideas about love anymore; I am searching for what might interest me in their experience of love. I search for satisfaction, not for explanations. The interactive media has put me on the side of the seekers, not of the listeners. This is one of the most difficult problems for interactive authors: their product needs to be interesting enough for the user so that she will want to actively explore it. But this is also a new way of consuming documentary content: the user is not the third level observer that she used to be in linear documentaries (the observer of the filmmaker' observations) but she is stepping into an enactor chair[21]: she is actively searching through a world of possibilities offered by the interactive documentary. While most users would describe themselves as browsing through the *[LoveStoryProject]*'s content, I would argue that they actually constantly take position upon this content and that they relate to the interviews with a position of power that would not have been possible in linear documentary. Although, as we

[21] In an enacted vision of perception we do not passively perceive a reality out there, but we actively form it thought our sensi-motor abilities. Through each click we actively and take a direction that gives meaning to what is to follow.

have previously seen, the user cannot change neither the options nor the content that make up the *[LoveStoryProject]*, this does not necessarily mean that this Living Documentary portrays the image of a fixed world where the individual has no power. The political position of the individual here is her making the cut possible, taking a position in the world, making sense of it, and therefore in defining herself.

> The originary moment for the creation of a system, according to Niklas Luhmann, comes when an observer makes a cut. Before the cut- before any cut- is made, only an undifferentiated complexity exists, impossible to comprehend in its noisy multifariousness… the cut helps to tame the noise of the world by introducing distinction, which can be understood in its elemental sense as a form, a boundary between the inside and the outside. What is inside is further divided and organized as other distinctions flow from this first distinction, until a fully-fledged system is in place. (Hayles, Katherine (1995:71)

Are there limitations to my "cutting" power? My freedom is contained between clear boundaries: I only have five possible choices at a time and I am unaware of the rules that create my next choices. How am I supposed to interpret my position in a world that was defined before I first encountered it? If I had not researched the *[LoveStoryProject]* I would probably have not realised that the links are rule-based. To the one-off player a link is just a link. But because I deliberately restarted the *[LoveStoryProject]* five times in succession, I discovered that a different sequence of possible links emerged each time. What has this added to my experience? The idea that each *[LoveStoryProject]* is a different movie each time has pushed me to be more playful with it. I know that I can start it again and again and always see something different. But at the same time it has given me a sense of responsibility: I cannot come back next time and try "the other link", because it is unlikely that this set of links will offer themselves up again. As happens in the "real world", my actions have consequences that I have to accept and for which I have to take responsibility. Here again, we may legitimately ask whether having to take responsibility would occur watching a linear documentary?

Finally, once I know that the *[LoveStoryProject]* is a ruled-based narrative, I cannot help wonder what the rules are. As in any relationship between human beings and the world one cannot stop questioning "what is behind it". While a reactive branching hypertext documentary can be fully explored (it is just a matter of going through every single possibility), an interactive hypertext documentary is a world

that we cannot fully understand. While I define my position in this world through every single cut, while I singularise myself through my choices, I modify the world that I am in, but I do not grasp it. The encounter between the two dynamic systems that we are temporary defines us. Am I re-enacting, through the *[LoveStoryProject]*, my fundamental position as a human being in the world? Is the *[LoveStoryProject]* pushing forward a constructivist view of perception, where I make sense of the finite input that my body receives from the world by making embodied actions that define me as an autonomous responsible being?

4. What stabilises, destabilises, or ends the *[LoveStoryProject]*?

The database that is the *[LoveStoryProject]* is stored on a server. It materializes on the users' computer screens with a simple click on a website menu. When the user selects "watch", the introduction video starts playing and the five of all the possible interview clips are offered up. It runs on Flash, so although it runs on most computers, on an iPad the screen remains blank.

Since the architecture and organization of the *[LoveStoryProject]* is closed, the user has no way to modify it. Apart from an external computer crash, or a server error which could interrupt the flow of data, the documentary will keep running depending entirely on the rhythmic relationship between the choices of the user and the dynamic algorithmic calculations of the Korsakow software. If the user stops clicking, the current video segment will run till its end, go silent, and leave a black screen with five active possible links. Those links will stay as potential paths if the user does not select them. The silent computer screen (there is no audio looping on the background) will wait, and eventually disappear when the user will close the browser window, or just exit the website. So what would it mean to speak of stabilization or destabilization of the system in such a case?

In Deleuze and Guattari's work the notion of stabilization or destabilization is linked to the one of 'territorialisation'. When DeLanda has used such notion in the context of social studies, he has described 'territorialisation' as a process that 'increases the internal homogeneity of the assemblage' (2006:12). In the social entities that DeLanda is considering in *A New Philosophy of Society,* territorialisation stabilizes an assemblage via a spatial process (for example face-to-face conversation) or by excluding certain people from an organization. Is exclusion of unwanted people a

mechanism of territorialisation for the *[LoveStoryProject]*? I believe not. People who do not have access to a computer are effectively excluded, but the *[LoveStoryProject]* does not seek its authority in computer literacy. On the contrary, its authority derives from presenting itself as a free to view art project that is accessible to anybody with a computer and broadband. A hacker who wanted to take down the *[LoveStoryProject]*'s website would be considered a threat, but a non-user is not. The more users it has, the more the artwork gains authority. On its website[22] Thalhofer writes 'In 2005 the [LoveStoryProject] was invited to the Fringe-Festival in Dublin. In September 2006 more interviews were made for the Berlin Blind Date Party, organized by Jim Avignon at Galapagos Art Space in Brooklyn, New York'[23]. The project is therefore presented as an experimental video art piece sponsored by the Goethe Institute. It is presented as a work of art done by an artist and backed up by a cultural organization. There is a big difference between what gives authority to the *[LoveStoryProject]* and what stabilizes it. Authority has to do with external recognitions, while stability guarantees a longer life to the project.

If the concepts of territorialisation/deterritorialisation are crucial in Deleuze and Guattari's assemblage theory (later applied to social entities by DeLanda) they might be less relevant for the Living Documentary. As will be explained in the next paragraphs, stabilization in a Living Documentary is not about homogeneity but about fluidity and immersion.

When considering what stabilises and destabilises an autopoietic assemblage such as the *[LoveStoryProject]*, one needs to consider different levels of relations: relations within its technical dimension, within its cultural dimension and within its author-interface-user dimension. These three dimensions, and possibly more, are the ones that assure that the *[LoveStoryProject]* is played/viewed for a certain amount of time and that it can be played/viewed. Any disruption to the Living Documentary's external relations, the connections between the piece and a technological infrastructure such as the Internet, Korsakow and the computer, could be lethal to the project. These disruptions could be technical, but they could also be of political, viral or economical order. If a government was to censor the website, if a virus was to attack the server or if electrical power cuts were to happen, then the access to the *[LoveStoryProject]* would effectively stop functioning, or simply disappear from the

[22] From http://www.xxlove.thalhofers.net/, accessed 22.03.10.
[23] From http://www.lovestoryproject.com/, accessed 22.03.10.

Web. This can be seen as a form of death, a possible ending point to the Living Documentary's existence.

Disruptions to its internal relations, that happen while the project is running, can also disrupt the life of the artefact. If the user is captured by the multiplicity and diversity of points of view portrayed by the *[LoveStoryProject]* a certain stability is established and the interactive documentary will have the time to evolve and show its multiple facets. If the user is not grabbed by the pleasures of choosing one face and hearing her point of view, or if technical problems modify the speed of such interaction (for example if the speed of the streaming is slow and keeps disrupting the video viewing), then the *flow*[24] of the experience will be disrupted and the documentary could be stopped or closed. The *[LoveStoryProject]* only exists if its experience is fluid and of interest to its user. The moment the flow is interrupted, the risk is that the user becomes bored and stops choosing between options. At that moment the *[LoveStoryProject]* stops calculating its possible new directions and stops generating new forms of itself. As any Living Documentary, the *[LoveStoryProject]* has certain autopoietic behaviours. As we will see in the case studies of subsequent chapters, certain Living Documentaries are more autopoietic than others, but all of them will cease to exist if their organization is not able to function anymore. Since the *[LoveStoryProject]*'s organization depends on both internal and external relations, its existence has different life-spans. If the data, for whatever reason, disappears from the server, the *[LoveStoryProject]* ceases to exist for all. But its temporal life-span, the one determined by the single-user relationship with it, lasts for the time that both the user and the artefact are in connection.

Finally, what creates the immersion, interest and flow that will keep the user "in relation" with the *[LoveStoryProject]* for a certain duration?

Psychologist Csikszentmihalyi considers that flow requires 'a balance between the challenges perceived in a given situation and the skills a person brings to it' (1990:30). The skills required of the user in the *[LoveStoryProject]* are very simple: one just needs to click on a face (or on the roll-over text that appears on the face if

[24] By *flow* I mean the successful feeling of fluidity that can happen when the interplay user/content/machine works well enough to be immersive for the user/participant. Studying the feeling of immersion that artists can experience while painting, psychologist Mihaly Csikszentmihalyi has called flow the 'optimal experience' (1990:24) achieved when the goal-seeking tendency that shapes the choices we make among alternatives feels in harmony with the contents of our consciousness. Flow theory can be applied to any activity that creates a fluid experience between man and tools/machines (paint brushes, music instrument… and also computers).

the mouse rolls over it). This means that the flow is not determined by the difficulty of the task (which might be a motor of immersion for some game narratives) but by the perceived interest of the videos. More exactly, the content of the interview clips, their relevance to the user's perception of love, or the challenge that they represent to the user's point of view is what holds the piece together. The *[LoveStoryProject]* is a carefully crafted set of multi-cultural and multi-personal points of view on a common topic. It is its efforts to portray love in its multiple dimensionalities that is touching. For some users the absence of a unique narrative path might be difficult. As all branching non-linear narratives, the *[LoveStoryProject]* is based on the logic of choices, it has multiple narrative paths and no fixed ending. What makes it relevant for the user is to be found in the interviews and in the linking between one clip and another. The *[LoveStoryProject]*'s interviews are not meant to prove a precise point. On the contrary, as Thalhofer says 'without claiming universal validity, the answers provide a new perspective on your own and the other culture'[25]. The piece is meant to open the user's mind, to add perspectives and to create self-reflection. The aesthetic of the hypertext Living Documentary assumes a willing participation of the user in the act of choosing within a set of options… can such logic sustain flow for a long time? At which point does the user stop her linking function between the database and the software, and why?

The power to stop this machinic encounter ultimately belongs to the user: she is the one that can say "no", or "enough", to the *[LoveStoryProject]*. While the power to choose options during the viewing of the hypertext documentary is somehow limited and pre-orchestrated by the author, the power to stop viewing is totally in the hands of the viewer. This could happen at any moment, and this is the act that determines the temporary life span of the Living Documentary. Politically the *[LoveStoryProject]* asks participants to discover their desires and beliefs, more than their voice. If they cannot add to the database, they can say no to it. If they cannot communicate their thoughts to others via the Living Documentary, they can still formulate their own answers for themselves. But more importantly: when choosing between options, users are not supposed to find "the best clip", "the narrative highlight", but to position themselves while constantly asking "do I care?", "do I want more of this?". Even if often flagged as an exploratory and observational

[25] From http://www.lovestoryproject.com/, accessed 22.03.10.

journey for the user (Ryan, 2005; Platt, 1995) the hypertext Living Documentary is actually more a journey of self-discovery, where desire and interpretation are more important than action.

Summary

In this chapter the relational approach of the Living Documentary was applied to the hypertext interactive documentary (one of the four interactive documentaries modes coined in chapter one). It has been questioned if a hypertext interactive documentary can be seen as a dynamic system (in the sense that it can act on its environment) that has an organization (a logic of interaction and self-organisation that determines what it is), that has a structure (the materiality of its components but also their relations to technical protocols and design decisions), that can be more or less open to change (operationally closed/open) and that can have levels of self-making (levels of autopoiesis).

We started by recalling the main characteristics of the hypertext mode - which is characterized by the exploration of a database narrative, with a database that is closed and links that can be pre-determined or rule-based. The distinction between *reactive* (one input-one output) and *interactive* documentary (one input-many possible outputs) was made and the *[LoveStoryProject]* was chosen as main case study of hypertext *interactive* documentary. The Living Documentary's approach was then used to identify the heterogeneous *components* and *dimension* that form the *[LoveStoryProject]*.

We started by selecting some components that were considered determinant in the *[LoveStoryProject]*. Those components were then linked to the possible dimensions that they can form, noticing that such dimensions are interconnected and co-existent. Unwrapping some of those dimensions allowed me to link them to see how the *[LoveStoryProject]* is organized as a system. Its organization has a database logic where the author/software/user sub-assemblage sees the author as the only one that can add content to the archive, and the user as the only one that allows the project to materialize in its different forms - code and technical glitches permitting. Through this mechanism, the user is placed in an enacted position within a limited world of which the rules are not known to the user. Via the linking process both the user and the documentary co-emerge and co-constitute the *[LoveStoryProject]*. During this

rhythmic encounter they both shift identities resingularising themselves through each click. It was argued that the *[LoveStoryProject]* has an identity, even if it is an unconscious one, represented by the set of possibilities that are present at each moment in time. Its identity is therefore linked to the user's one, since she is the one that triggers the different forms of the artefact. This made us question the ontological role of the *[LoveStoryProject]*.

At a first glance the relationship of user to Living Documentary seems to limit the power of the user to her clicks, to her choices within pre-established options, and to her interpretation of the videos. This would suggest that we, as human beings, have freedom of exploration and interpretation but no freedom of action. And yet, using the concept of the Living Documentary to zoom into the user-video dimension, we could see that while the documentary materializes in different forms the user shifts from "user" to "someone who is interested in religion" or "someone who is interested in handsome guys" gaining responsibility and subjectivity through each choice. This indicates that the user is not only browsing the artefact but, through this act, is constantly creating new possible subjectivities. The political position of the individual here is in making the cut possible, in taking a position in the world and in making sense of it. The user also has a final power: that of stopping interacting with the *[LoveStoryProject]* and, de facto, terminating the Living Documentary's temporary life. This final act necessitates a search for desire: one has to ponder how much one cares about the *[LoveStoryProject]*, and how much time and effort should be dedicated to this relationship. Politically the *[LoveStoryProject]* asks participants to find their desires and beliefs, more than their active voices. This is a world where desire, learning and interpretation are more important than action.

Finally, we questioned what stabilises and destabilises the *[LoveStoryProject]*. Any disruption to its external relations, the connections between the *[LoveStoryProject]* and its technological infrastructure (the Internet, Korsakow and the computer) could be lethal to the Living Documentary. These disruptions could be technical, political, viral or economical by nature. The relationship user-to-computer can act on the temporary life of the Living Documentary. If life is considered as the materialization of the digital artefact through the interaction with the user – rather than the mere existence of digital data on a server – then the user can stabilise and destabilise the *[LoveStoryProject]*. By not choosing, or leaving its website, the user stops the fluid functioning of the digital artefact. Both temporal and final deaths are therefore

possible: as with any living entity, the *[LoveStoryProject]* will cease to exist once its organization can no longer function.

Chapter 4 - The experiential documentary through the lenses of the Living Documentary

As seen in chapter one, the experiential mode of interactive documentary emphasises interaction in physical space. It can use a screen interface (for example a mobile phone in Blast Theory's *Rider Spoke*) but its raison d'être is to position the user/participant in a physical space and to use such space as an integral part of the documentary. The environment, in the common sense of "what is around the user/participant", is not the *context of* the interaction anymore (the room in which the computer is placed) but the *place of* the interaction (the stuff one can interact with). At a first glance one might think that experiential documentaries differ from screen based documentaries by simply putting the emphasis on *felt experience* – "felt" in the sense of "graspable through the senses" as in physical space all our senses are engaged, while in screen based artefacts sound and vision are prevalent. It will be argued that experiential documentaries give us the opportunity to consider *experience* as more complex than felt experience of the senses. The cognition generated by the meeting of our five senses in a given moment can be considered as just one level of what I will refer to as *affected experience*[1] – where felt reality is a sense of being in the world that is the result of a complex and dynamic relation between physical abilities, cultural interpretations, different levels and understanding of space and time resulting from the constant changing relation between the individual and her environment. This notion of *affected experience* goes back to psychologist James Gibson's idea that 'the observer and his environment are complementary' (1979:15) and to philosopher William James' flux of 'pure experience'[2] (James, 1912:93).

[1] As it will be explained later, the word *affected* is deliberately chosen to relate to the theories of affect (James, Deleuze, Guattari, Massumi) that have pushed a view of perception as much larger than the conscious realization of an external world interfaced by our body senses.

[2] 'Pure experience', writes James, 'is the name which I gave to the immediate flux of life which furnishes the material to our later reflection with this conceptual categories' (James, 1912:93). 'The flux, both as a whole and in its parts, is that of things conjunct and separated. The great continua of time, space, and the self-envelope everything, betwixt them, and flow together without interfering' (James, 1912:94). Without going as far than James does, when he argues that 'thoughts and things are absolutely homogenous as to their material' (1912: 96) I will take the position that experience is the embodied/felt relation that we have with ourselves and with the heterogeneous environment that conditions us.

If the environment is no longer seen as the place where human action takes place but as the 'medium that affords action' (Gibson, 1979:16) then an interactive documentary that creates new affordances in physical space opens both the participant and the environment to new mutual co-constituting possibilities. As Lucy Schuman points out in *Plans and Situated Actions*, 'constraints on interaction (…) are not determinant of, but are rather "production resources" for, shared understanding' (1987:95). A physical environment can therefore be mediated by a locative digital documentary that adds constraints to the relation participant-environment. By moving through this new constrained space one can generate new understandings, and new forms, of both the environment and the participant.

The emergence of locative and portable media such as mobile phones, mobile computers, or just digital audio device - that have changed our social habits in the last twenty years - has allowed us to question the distinction between public and private space and the relation that the environment might have on our experience and understanding of the world. It is in the context of such debates that interactive experiential documentaries are interesting: they offer an opportunity to place "affect theory" (Massumi, 2002; Deleuze 1978, 1988; James, 1912) at the centre of our relation with ourselves and the world.

The use of digital mobile devices and GPS[3] positioning has allowed locative projects such as *Can You See me Now* (2001), Amsterdam *Real Time* (2002) *The Milk Project* (2004), *Greenwich Emotion Map* (2006) and *Urban Tapestries* (2004) to be realized. These projects are normally described as locative or pervasive art projects, but they have shown how mobile digital platforms can be used to position the user/participant in a story/game that happens around them, and not on a screen. This possibility has obviously inspired both fictional and factual authors. The line between locative art, game and documentary projects has become very thin, as in all of those the participant can effectively "experience" a narrative in physical space which can have game, fictional and factual aspects mixed together. A 'profound sense of being there' (Davenport, 2005:1) is therefore common to locative projects and blurs the

[3] GPS stands for Global Positioning System. It is a navigational system involving at least three satellites and computers that can determine the latitude (x) and longitude (y) of a receiver on Earth. Interestingly, GPS does not take height (z) in consideration. Since the 1990's mobile phones can be GPS enabled, meaning that their position can be calculated and used for commercial or other applications (like Geotagging - applying location coordinates to digital objects such as photographs and other documents for purposes such as creating map overlays - or GPS Tours – the location determines what content to display, for instance, information about a nearby point of interest).

distinction between game, fictional and factual. Place 'immerses characters in a situated context where details of history, culture, and the available physical affordances provide opportunities and constraints that influence the choice of actions and interactions' (Davenport, 2005:1). Locative artists have been seduced by the possibility of unveiling the hidden layers of a location through narratives:

> A location is full of unseen layers: in time, of events past, of places gone, derelict or even remaining, but with ghosts of former resonance, and memories of people. Place is an agitated latency; anywhere you stand has unseen stories and knowledge dormant beneath you. The cell phone can excavate the lost layers of what has come before, as signals triggers sounds, accounts, images and even video of what must be remembered. (Locative artist Jeremy Hight, 2006:128)

The narratives that are placed, and retrieved, in physical spaces need a digital portable device to be heard or seen. The space in which they exist is not only layered with memories of the past, but also with the technology that makes them accessible. The users of locative narratives effectively move through an augmented space that media theorist De Sousa e Silva has called a 'hybrid space'[4] (2006:262). Those spaces are connected spaces, where mobile phones and Web-enabled, or Wi-Fi zones[5], allow people to mix physical and remote contexts to create a new hybrid reality[6]. Anybody having observed someone speaking on the phone in a bus will have noticed how private and public, physical and non-tangible, present and remote contexts can mix creating a new space of shared information for ear dropping passengers. As sociologist Manuel Castells pointed out in *The Rise of the Network Society*, the advent of electrically operated communication technologies (such as the telegraph and the telephone) had already introduced simultaneity in social

[4] For locative expert de Sousa e Silva 'hybrid spaces are mobile spaces, created by the constant movement of users who carry portable devices continuously connected to the Internet and to other users' (2006:262). Hybrid spaces are different from what has been termed mixed reality, augmented reality, augmented virtuality, or virtual reality, because they are about connectedness more than 3D worlds. 'The possibility of an "always-on" connection when one moves through a city transforms our experience of space by enfolding remote contexts inside the present context' (de Sousa e Silva, 2006:262).

[5] In a Wi-Fi zone any enabled device - such as a personal computer, video game console, smartphone or digital audio player - can connect to the Web when within range of a wireless network connected to the Internet.

[6] The word "hybrid" will refer in this chapter to De Sousa e Silva's notion of a reality shaped by the presence of mixed media. Philosopher Bruno Latour has also used such word to define 'quasi-objects' and 'quasi-subjects' (1993:89), but it is not with such connotation that the word "hybrid" is going to be used in this text.

relationships at a distance, but it is the development of micro-electronic-based digital communication that has 'transformed the spatiality of social interaction by introducing simultaneity, or any chosen time frame, in social practices regardless of the location of the actors engaged in the communication process' (Castells, 2010: xxxii). It is in such 'space of flow' (ibidem), a space that is 'not a tangible reality' but 'a concept constructed on the basis of experience' (Castells, 2010: xxxi) that experiential documentaries take place.

In an early example of locative narrative, *34 North 118 West* (2003)[7], participants walk in the streets of Los Angeles armed with a Tablet PC with Global Positioning System card and headphones. Depending on the position of the participant stories uncovering the early industrial era of Los Angeles are whispered into the ears of the urban flaneur, accompanied by historic illustrations on the computer screen.

Fig. 17 - *34 North 118 West*'s tablet PC device (http://34n118w.net/34N/)

[7] The best way to have a sense of what *34 North 118 West* might feel like to the participant is to watch the video on their website.
Available at http://34n118w.net/34N/site_media/34NORTH_4x3.mov. Accessed 11.01.11.

Fig. 18 - *34 North 118 West*, participants in the streets of Los Angeles (http://34n118w.net/34N/)

The idea of enhancing physical space with some virtual content that is only accessible on location is common in numerous locative projects. Since the virtual content is location specific it does not rely on a visible screen based hyperlinked structure to be accessed. In interactive screen narratives, the user clicks onto a text, a picture or a video, to "jump" to the next screen[8]. In experiential and locative narratives physical positioning in space is what opens up the possibilities of the user into the story, as it is often body positioning that allows access to digital content. Interestingly in a logic where the user is both the cursor and the mover of the cursor it is not anymore the click that is the essential moment of action. The moving of the participant becomes determinant. If one sees the city as an *Euclidean space*[9] where one can move from A to B without changing the space itself, then locative documentaries are just participative performances where the user moves through embodied choices that feel different from screen choices. But if one sees the city as a *topological space*, where 'a path is not composed of positions, it is nondecomposable: a dynamic unity' (Massumi, 2002:6) then movement through such space becomes an interval of transformation that is as important, if not more, than the choice that will be possible once the user will have stopped in a certain position. Such 'dynamic space' (Massumi, 2002:183) is not anymore a means of getting from A to B, but an experience (hence experiential documentary) of

[8] From the large family of screen based interactive narratives I exclude 3D game narratives where the navigation is inspired by physical navigation and therefore is more fluid than hypertext navigation.

[9] In Euclidean space every point is determined by three coordinates (x, y and z). In such in three-dimensional space movement from A to B is calculated as a change in coordinates from point A to point B.

unknown potentialities dictated by the encounter of the user, the environment and the digital artefact.

In *34 North 118 West* the voice of a train driver will only emerge if the participant is walking along a rail track in Los Angeles, transforming the body of the participant into the input and the digital voice into the output. What normally requires a choice (embodied in the act of clicking the mouse) in interactive screen narrative can become an affective experience in locative narratives. Is it the car that stopped that made the user cross the street and walk along the rail track? Is it the user who willingly decided to go there? Is it the affordances of Los Angeles' dynamic space or the pre-planned path of a participant that has brought such user next to the rail track, at a precise moment in time? To me *34 North 118 West* becomes interesting when we consider the voice of the train driver as the result of a space-user encounter that will itself act as a condition for the next space-user transformation.

If walking in a city is a 'space of enunciation', as says philosopher Michel de Certeau (1984:98), where the pedestrian speech act organizes an ensemble of possibilities, creates relations between objects, positions and time (by being next to the rail track the pedestrian creates a *now*, a *here* and a *there* but she also affirms herself, transforming a *place* into a meaningful *space*[10]), then the participant in *34 North 118 West* is obviously active; she is clearly affecting her environment and she is taking choices, but those are embodied into a speech act that has nothing to do with rationally choosing what should the next screen be about. The user becomes the cursor and space becomes the screen where the hyperlink is embedded. Choice becomes the result of a *situated action* (Suchman, 1987:50) 'where every course of action depends in essential ways upon its material and social circumstances' (ibidem).

As media critic and artist Kate Amstrong notices, *34 North 118 West* expands the hypertext logic into physical space since in *location aware* work, clickable points are

[10] In *The Practice of Everyday Life*, de Certeau makes the distinction between a *place* and a *space*. A *space*, he says, 'exists when one takes into consideration vectors and direction, velocities ad time variables' (1984:117). In other words, '*a space is a practiced place*' (ibidem). In *Where the Action Is* interaction theorist Paul Dourish applies such distinction to Human Computer Interaction seeing *place* as an 'occupied space' (2001:89) where behaviour is not only dependent on physical properties but also on social norms. To design for *place* rather than *space* then means 'to turn our attention away from the structure of the space and towards the activities that take place there' (2001:90). It also means to keep in mind that 'an idea of place is relative to a particular *community* of practice' (italic in original) (ibidem). Applied to experiential documentaries this makes us realise that the potential of locative documentaries is in re-defining space and make it personal and situated for, and by, each user/participant.

placed in the city space itself. 'It is hypertext but without the links between nodes: nodes in *physically located* narrative works are imbued with content and then left where they can be encountered by the reader/user/walker - in any order, in no order, in an order determined by the movement of the user' (Armstrong, 2003:1, italics in original). Obviously one could argue that screen links are also located in screen space, but it is the richness of physical space that gives the user an unlimited potential for transformation that is currently impossible to experience in 3D digital worlds.

For its author, *34 North 118 West* also has a political role to play: 'the landscape' writes Hight 'can hold dissent, can reveal facts less known or even repressed in time' (Hight, 2006:128). Making the past accessible is one of the keys of *34 North 118 West.* Locative projects can therefore have a political impact that relies on an aesthetic of fluidity. This goes against the stop-think-choose-and-go hypertext logic. Experiential narratives look for emergence and serendipity, as the aim is not only to choose but to experience the dynamic relation environment-user. This also means that what is effectively a *reactive* interaction might not feel as such, since the pre-determined output (the voice of the train driver) could have emerged from the context, and not from a choice of the user. It might have been the condition created by the environment – the car that stopped and made the user cross the street towards the rail track – that have allowed the train driver to be heard by the user. But also, once the voice is heard, the environment changes once more, as it acquires through the sound track an added layer of history that was invisible to the eye.

In another locative work, *MIT in Pocket* (2003), Glorianna Davenport and her MIT lab team, mixed fictional and factual characters to guide students through the MIT campus. The system delivered video segments based on scripted contextual cues, including location and time of day, into student's PDAs[11] and mobile phones. The viewers were also able to send messages and share their acquired video clips with others. In her evaluation of the project, Glorianna Davenport concludes that 'an immersive narrative can provide augmentation to the everyday situation, as well as time to negotiate meaning with a larger audience' (Crow D., Davenport G. and Pan P, 2003:8).

[11] Personal Digital Assistant.

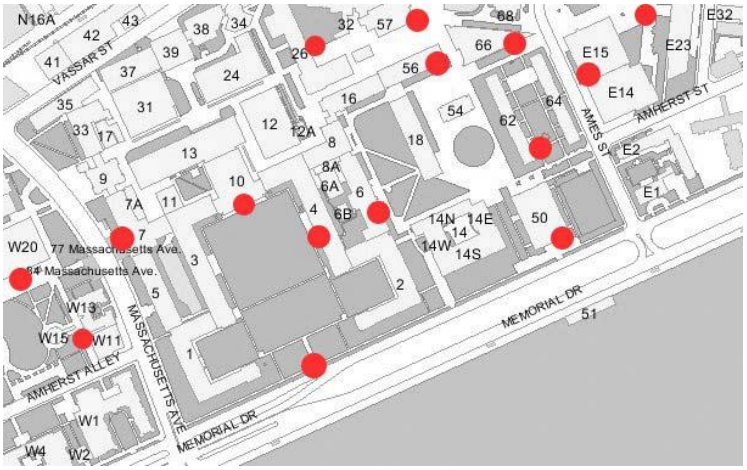

Fig. 19 - Story locations of *MIT in Pocket*
(http://alumni.media.mit.edu/~ppk/Publications/Pengkai%20Pan%20Thesis.pdf.)

Interestingly, *MIT in Pocket* mixes fictional plots with factual data, allowing students to enrich their knowledge of their campus through a crafted mixture of entertainment and documentary. 'For creating the whole *MIT in Pocket'* writes in his PhD MIT co-author Pengkai Pan 'our goal was to mix the fictional stories with the documentary-style stories, so that the audience would be able to witness fictional stories as well as virtually "meet" legendary MIT figures in a relatively dense story Web' (Pan, 2004:97). In this example location is not only layered and hybrid, but also invented – opened to fictional stories and encounters. Opening the flow of experience to fictional elements blurs the distinction real/invented, objective/subjective, idea/dream - that is often central to documentary practice - and questions the clear cut between such categories.

A more recent project, and one of the few that has been openly called a locative documentary[12] by its authors, is a prototype[13] done by a group of my MA students at the London College of Communication, London, in 2010. *Heygate Lives* (2010) is a proof of concept where students Nerissa Davies, Judit Layana, Xiao Li and Sheena Bouchier interviewed the residents of a council estate in London, the Heygate estate. Situated in the area of Elephant and Castle, London, the Heygate estate was due to be demolished in winter 2010 and had been slowly emptied of its residents since 2008. A few months before its full demolition, the estate looked like a ghost town:

[12] *34 North 118 West* has been called a *locative narrative* by its authors, while *MIT in Pocket* is referred to as *hybrid mobile cinema story* (Pan, 2004:97) by co-author, and PhD student, Pengkai Pan.
[13] The prototype and demo was presented to LCC's MA Interactive Media students on the 11th of January 2010, and I tested it in situ. A demo of the prototype is available at http://www.behance.net/gallery/Interactive-locative-documentary-iPhone-web-app/816492. Accessed 14.01.11.

an empty and gray place with barricaded windows and locked doors. Davies, Layana, Li and Bouchier had the idea of organising a tour of the estate that would be viewed on an iPhone. Using the GPS capabilities of the device, *Heygate Lives* knows where the participant is and streams a pre-recorded video corresponding to the location of the participant[14].

Fig. 20 - *Heygate Lives*' navigation map

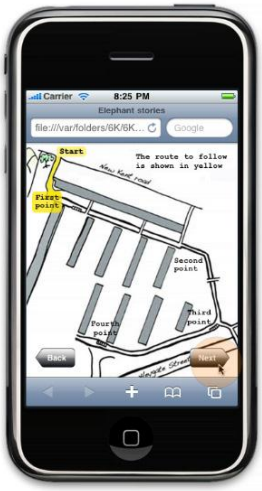

Fig. 21 - The First screen of *Heygate Lives*

(All the screen shots of *Heygate Lives* are courtesy of Judith Layana, co-author of the work.)

When stopping in front of a closed door the participant is able to watch a video of the flat's previous resident, in which he or she describes his/her life and memories in the estate. The participant is therefore in the unusual situation of inhabiting the space of someone that is not there anymore and of witnessing with her own eyes the difference between "lived" space and "mediated" space. It is only through the mediation of the iPhone's video that the participant adds a layer of knowledge about the space that she is physically inhabiting.

[14] Due to technical difficulties the GPS capabilities were not implemented and participants had to follow a screen map and a guide/presenter to navigate the estate. Nevertheless, the original concept was to use the GPS capabilities of the iPhone to stream video in situ.

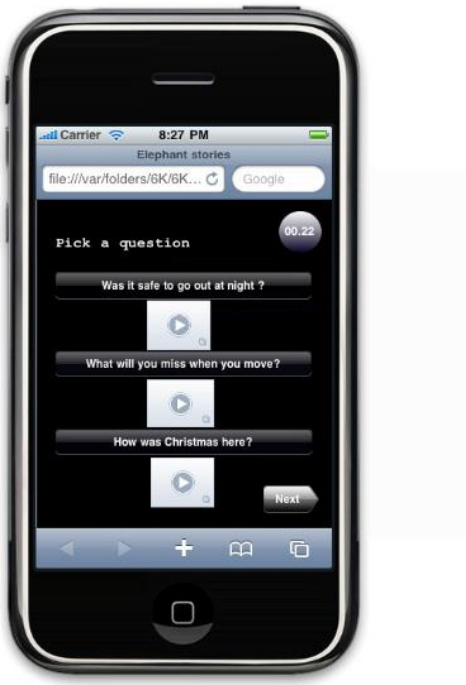

Fig. 22 - *Heygate Lives*' questions screen

Fig. 23 - *Heygate Live*'s interviews to the ex-residents of the estate

In *Heygate Lives*, as in the other two projects, the interaction is *reactive* but the participant is more aware of it. Here the participant follows a video guide and stops in front of a location in the Heygate estate imposed by the pre-determined narrative. Once in front of a locked door the user is then able to choose between a few pre-determined questions on her iPhone interface (Fig. 22) -and only then she will see the video interview of the evicted resident (Fig. 23). *Heygate Lives* is a locative narrative that uses a branching navigation. The story does not unfold if the user is not physically in the spot that gives meaning to the narrative, but the user still has to

choose between options for the story to continue. Also, because the video of the interview is being streamed into the iPhone's screen, the user needs to partially abstract herself from the physical surroundings to concentrate on the interview.

Most interviews describe happy memories in a place that now looks empty and often scary to the participant. Once the interview is finished, and the participant looks back at the barricaded and locked door - happily inhabited one second ago by a person in the video - there is a moment of affective tension[15]. The tension is the result of several factors: first there is a change of perception of the place which felt inhabited in its mediated form, and is suddenly empty in its physical form; and second there is a radical difference between the descriptions of happy lives and the present feeling of a dangerous no-man-land. Here James Gibson's idea that perception is not only optical but environmental is particularly useful because it allows us to pin down the node of the tension: my eyes are watching a video on my iPhone, but my whole body is sensing an environment that is contradicting the video. While the lady on the video is welcoming, the environment around me feels somehow hostile. Is it the dog that is running loose and that is barking at me? Is it the door that is barricaded and has graffiti all over? The smell of urine that is pinching my nose? Or maybe the gang of youngsters that I cannot see but that I can hear approaching? While part of me is watching the video some other part is realising that I am holding an iPhone in a deserted estate, and that this might not be particularly safe… As Brian Massumi says *sensation* ('the medium where the input from all five senses meet' - Massumi, 2002:62 - which he actually calls mesoperception) and *emotion* (the re-cognised affect that is identified by the individual as the relation subject-object) go hand in hand. Those two might not happen exactly at the same time, but 'both levels, intensity and qualification, are immediately embodied' (Massumi, 2002:25) so the contrast between two co-exiting, and yet contradictory, affective experiences also resonates into two opposite emotions: empathy for the past residents and fear for oneself. Mediated space acquires here a political value where fear, empathy and uneasiness become compatible in *affected experience*.

Also, *Heygate Lives* reverses the usual filmmaker/spectator roles: a linear documentary about the Heygate estate would have found a viewer sitting at home watching a screen documenting an empty building. In *Heygate Lives* the viewer is

[15] At least this has been my reaction when I tested the narrative, in situ, on the 18.01.2010.

actually in situ and can *embody* the place and therefore *feel with* the place. The dog, the band of youngsters, the graffiti is conditioning my felt experience while the video adds a layer to such felt reality. The video format is not used here to document the surroundings, since the participant can see the place with her own eyes, but to inhabit what is not viewable anymore: its now gone residents and their memories. Video materialises ghosts and mobile phone puts them back in their original context, layering my perception of such place. In this locative project, space is a 'hyperspace' (Massumi, 2002:185): layered and spacio-temporal but also inhabited by a mediated presence. In such an environment, perception is not the cognitive explanation resulting from the objective input of an empty estate processed by my senses. To perceive, as argues James Gibson, 'is to be aware of the environment and of oneself in it. (…) The full awareness of surfaces includes their layout, their substances, their events, and their affordances. (…) This definition includes within perception a part of memory, expectation, knowledge and meaning – some part but not all of those mental processes in each case' (1975:255).

34 North 118 West, MIT in Pocket and *Heygate Lives* all share the aim of documenting a space (Los Angeles, the MIT campus and the Heygate estate), using position as a hyperlink into digital content. This content is not just adding a layer of information about such a location, but it is augmenting and changing the felt reality of such physical space for the participant. Moreover, the user needs to move through space to make sense of such an artefact. For those projects "meaning" is the result of an *embodied interaction* (Dourish, 2001) where 'embodied interaction is the creation, manipulation, and sharing of meaning through engaged interactions with artefacts' (Dourish, 2001:126). Being there, in other words, is fundamental because in embodied interaction 'action both produces and draws upon meaning; [and] meaning both gives rise and rises from action' (Dourish, 2001:206). The idea of *documenting* a place in locative documentaries assumes that physical engagement is a catalyst for a different type of meaning, a meaning that would be different if the participant were to sit in front of a movie screen. If, as Lucy Suchman claims, 'the coherence of situated action is tied in essential ways not to individual predispositions or conventional rules but to local interactions contingent on the actor's particular circumstances' (1987:27) then the embodied interaction between two dynamic entities (the user and the environment) is meant to create infinite possible situated meanings – and therefore infinite documentations of such place. The corollary of this

co-constitutional process between the user and her environment is that the user too changes constantly. She is a momentary form in a flux of infinite possibilities.

As seen in chapter three, in hypertext documentaries the distinction between interactive and reactive interactivity is key - because the hyperlink is what determines the next cut, the jump from one screen to another – and depending on the algorithm that computes the jump, the next video may or may not be pre-determined. In the experiential mode, the jump - the change of state - is not a click but a move and action: a reflection in physical space. Also, the notion of user choices that is so dominant in hypertext documentaries, has layers of complexity in experiential documentaries: the user who walks in physical space is constantly choosing; the choice proposed by the digital device are of another sort, and come as an addition to other embodies choices. In *Heygate Lives,* one is deciding where to go, what to look at, where to stop and at the same time one is deciding which video to play. There is quite a difference between sitting at a desk, with next to no physical movement - concentrating on a screen, clicking a hyperlink, and having immediate feed-back through a jump to a new a video segment (as in the *[LoveStoryProject],* 2007) - and walking freely into a city, constantly taking choices of where to turn, avoiding cars and looking at people in the street while listening to a voice on a earplugs (as in the examples seen before). In locative interfaces, situated and social interaction are more topical than in desktop screen interfaces. The emergent richness of the physical environment creates richer conditions for movement. If, at any point, a dog scares me and make me run around the Heygate Estate, my understanding of the place will not be limited by the choice of the three characters that I can watch on my iPhone screen. The environment can at any time create new conditions that will enhance an experience of the estate that was not covered, nor probably thought of, by the makers of the interactive documentary *Heygate Lives*.

Experiential documentaries have another fundamental characteristic: since they often make use of mobile platforms, such as mobile phones or portable computers, they can use such devices to invite the user/participant to create their own content and to de facto participate to the database that nourishes their narrative. The participative nature of experiential documentaries is directly linked to the affordances of the media that they use - and to the conditions of the environment they take place in - but it is up to the author of a project to decide if, how and when such possibilities will be available to the user/participant. The specificities of experiential

documentaries are therefore totally dependent on how each project uses space, mobile devices, social interactions and time to create a specific embodied experience.

In the next sub-chapter, Blast Theory's *Rider Spoke* (2007) will be taken as a case study of experiential documentaries and the characteristics of the Living Documentary will be used as a frame of enquiry. The reason for choosing *Rider Spoke* is that it is both a reactive and interactive artefact and therefore its Living Documentary characteristics are more visible than in other locative artefacts. In the next sub-chapters such specificities will be flagged in detail but, first, *Rider Spoke* needs to be introduced.

Rider Spoke – a case study of experiential mode

Rider Spoke is a locative work that was first designed to be experienced in London in October 2007 - but that has since been presented in several cities including Athens, Brighton, Budapest, Sydney and Adelaide. In this text, unless specifically mentioned, I will refer to the London version of the work[16] - since it is the only one of which I have first-hand knowledge of.

In *Rider Spoke* the participants are invited to go to the Barbican[17], a cultural centre in London, with their own bicycle. They can also hire a bicycle at the venue itself. A handheld computer (Nokia N800) is mounted on the handlebar of the bicycle. This mini touch screen computer is Wi-Fi enabled and has an earplug and a microphone incorporated into it.

Fig. 24 - *Rider Spoke*'s Nokia N800 mounted on a bicycle (http://www.flickr.com/photos/michela/3343162543/in/photostream/)

Up to thirty participants can set off into the streets of London at the same time following the audio commands of the device and cycling through a journey that is set to be roughly fifty minutes long. As one leaves the Barbican and puts the earphones on, a soft female voice whispers the following words in your ears: "As you leave the Barbican today, take your time and just ride for a while. There's no hurry. I'll be

[16] A video of the work - filmed from a 3rd person point of view - is available online at http://www.blasttheory.co.uk/bt/mov/mov_rider_spoke.html. Accessed 3.03.11.

[17] A video documenting the opening of Rider Spoke at the Barbican can be seen at http://vimeo.com/2275985. Accessed 1.02.11.

asking you to record some things and I'll tell you when to come back. I'm familiar, clumsy and not as surprising as I would like to be. I cannot get to know my mum enough ever and I cannot write that letter to my Dad yet. I hope that you take time in your head to go somewhere you would not readily go to. I promise to come with you and I bless the very air you move through this night"[18]. The voice is very calm and the tone is personal.

Once outside the Barbican the voice introduces what *Rider Spoke* is all about: riding, finding places and answering questions. The voice continues: "This is one of those moments when you are on your own; you might feel a little odd at first, a bit self-conscious or a bit awkward. But you're all right and it's OK. You may feel invisible tonight but as you ride this feeling will start to change. Relax, don't forget to breathe both in and out and find somewhere that you like, it might be near a particular building or road junction, it might be near a mark on a wall or a reflection in a window. When you have found somewhere you like, give yourself a name and describe yourself".

From here onward, four sets of questions have been planned to create an increasingly personal relationship between the participant, the city and *Rider Spoke*. Matt Adams, co-author of *Rider Spoke*, explained to me[19] that they wanted to introduce an element of randomness to the experience, so that not every rider would be asked the same questions, although the general mood would be consistent. The first set of questions are designed to heighten the rider's awareness of her surroundings. The rider has to answer one of the following three questions, randomly chosen by the system[20]:

- Choose a building to make your own. When you find a building tell me what is it like and what you'd do there.
- Find me a stinking arsehole of a spot and tell me all about it.
- Think of a party that you went to and find a spot to tell me about it.

The task of the participant is to ride until she finds a spot that seems to fit with the question and stop there. Once she has stopped, she can record her answer by speaking into her microphone and she can listen to comments left by other people in the same area.

[18] Source: personal e-mail correspondence with Matt Adams on the 15.04.11.
[19] Source: recorded interview with Matt Adams on the 13.04.11.
[20] Each of these questions is preceded by a longer introductory text. Also, the participant does not know that there are several questions. When I experienced *Rider Spoke* I was convinced that everyone was being asked the same questions. This made me feel closer to the other participants.

Fig. 25 - *Rider Spoke*'s hiding message
(http://www.ternifestival.it/2010/index.php?option=com_content&view=article&id=189&Itemid=131&lang=it.)

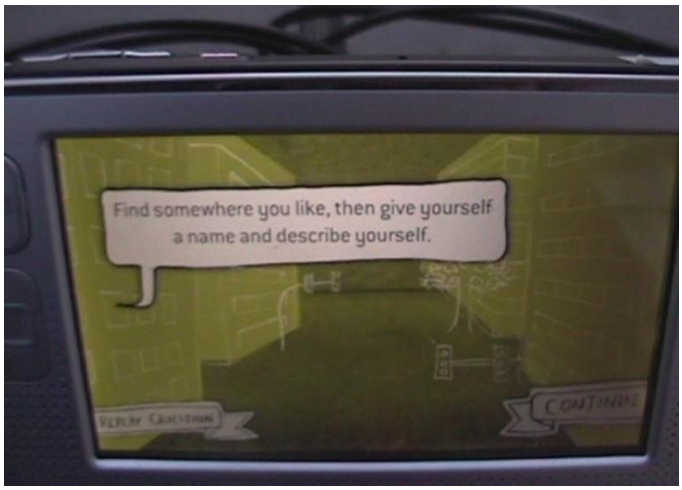

Fig. 26- Example of *Rider Spoke*'s questions (Sandra Gaudenzi)

The answers are then stored with their Wi-Fi Fingerprint location so that they can be retrieved by any other participant that stops in a nearby location. The work is designed in such a way that questions pass from mere observation of the city to a more personal level. This solitary and private mood is enhanced by the gradual disappearance of natural light, as *Rider Spoke* is designed to be experienced at sunset.

Fig. 27 - *Rider Spoke*'s bicycle rider (http://www.realtimearts.net/article/83/8880)

The next question is the same for everybody: "Choose a window. Tell what you see there and why you'd like to go through it". Through this question, the participant starts to see beyond the buildings, or maybe through them, and hopefully starts blurring the fuzzy line between the concept of inside and outside. This leads into a very private set of questions, one of which will randomly be posed to the rider (if the rider has been particularly quick in responding then more than one question will be posed to her):

- Think about your father. Find a place he would like and record a message about him.
- Find a quiet place and tell me who or what makes it all right for you.
- Follow someone and then describe who they are and where they are going.
- Find a doorway and tell me about the role secrets play in your life.
- Find a place where you feel sure. Tell me about leaving and not returning.
- Talk to me about a late night on the streets of the city when you witnessed something you shouldn't. Find a good spot for watching from a distance and then tell me what you saw.
- Find a place to be alone and tell me how your life would be without a secret.
- Find a clear view of the sky and tell me what keeps you awake at night.

Finally *Rider Spoke* arrives to the last question, which is the same one for everybody, before asking the rider to return to the Barbican. This last question is probably the most personal of all and Matt Adams told me that he has been surprised by the level of introspection that such question had generated.

The fifth and final question of Rider Spoke is about making a promise. "You've been riding for a while now. You've answered some of the questions I've asked and you've explored the city. Thank you. I have one last thing to ask of you and when you have answered please can you come back to the Barbican. Will you make me a promise? It might be small, a promise about tomorrow or a friend. It might be something more profound. But, now, tonight, here, make a vow about your intentions. Think for a few minutes. Go somewhere, stop your bike and say your promise out loud into the air".

The whole experience lasts around fifty minutes during which the participant has time to "plant"[21] at least five answers into her chosen locations, and to listen to many other people's personal recordings. *Rider Spoke* happens in real time (while one cycles) and is a completely private experience (one is alone while cycling). This private experience however is openly shared with others through the recording of comments. By using a personal device in a public space, and allowing such device to communicate to others, *Rider Spoke* blurs the clear-cut distinction between private and public space that has been topical since the invention of the Walkman. As digital media Professor Michael Bull has argued '[Walkmans] permit a reorganization of public and private realms of experience where what is traditionally considered as 'private' experience is brought out into public realms in the act of individualized listening' (Bull, 2001:180)[22]. As the Walkman, *Rider Spoke* does 'encapsulate' (De Cauter, 2004:29) the rider in a private bubble and becomes 'a political act that creates micro-activities and confers a different sense of *polis*' (Chambers, 1990:1). And yet, as we are going to see in this chapter, *Rider Spoke* also allows communication, and cross-fertilisation, within private "capsules", and by doing so it creates a network that becomes a new microcosm of *Rider Spoke* partially-public capsules. As Blast Theory has declared on its website, the work is about exploring 'how games and new communication technologies are creating new hybrid social spaces in which the private and the public are intertwined'[23]. The political impact of *Rider Spoke* is not only about creating micro-activities and microcosms within the city, but about linking them together into a hybrid social space.

[21] In the sense of recording a message that is attached to a particular location.

[22] More recently Dr Bull has extended this vision to any portable music players. 'Portable music players' he said in an interview with BBC 'are "multi-faceted transformative devices", a "tool whereby users manage space, time and the boundaries around the self"' (Ward, 2004:1).

[23] From Blast Theory's website.
Available from http://www.blasttheory.co.uk/bt/work_rider_spoke.html. Accessed 10.10.10.

As we will later see in this chapter, this hybrid social space challenges the notion of time and space by making accessible in the "now" thoughts that have been formulated in the "past" in a near (but not clearly defined) location. Those comments are audio files that are stored on a server and can only be accessed by people going through the same experience, but at a different time. No website gives remote access to the data that has been stored. No website, no visible evidence is left of people's participation in *Rider Spoke*[24]; just a series of audio files are the trace of people's voice – a trace that is only accessible while in location, and not retrievable after. In its attempt to document the relation that people have with their city, *Rider Spoke* offers a moment of encounter. It is not an archive. It is not a watchable recording. It is not a permanent documentation. It is a temporal personal experience, an experience that stays anchored in the present where the *actual* occurs – following Massumi's idea that the *actual* occurs 'at the point of intersection of the possible, the potential, and the virtual: three modes of thought. The actual is the effect of the momentous meeting, mixing, and re-separation' (Massumi, 2002:136). Once the bicycle and the device are given back, this unique way to document the relationship people-city stays in the realm of personal memories. This is where *Rider Spoke*'s experience enters the past and leaves the actual.

Rider Spoke as a dynamic, reactive, interactive and collaborative documentary

One of the reasons for choosing *Rider Spoke* as a case study for experiential documentaries is that it goes one step beyond other locative documentaries, like *34 North 118 West*, *MIT in Pocket* and *Heygate Lives*, in creating a layered hybrid space. While, as seen before, locative documentaries are often *reactive*, and explore a fixed database through movement in physical space, *Rider Spoke* utilises user-generated content to populate its database – a database which, in turn, gives meaning to the place in which it is accessed.

[24] This is at least true in the short term. When the participant finishes her ride there is no website to turn to if she wants to listen to any of the recordings. But since all participants have to sign a letter of copyright release, Blast Theory keeps the rights to re-use such content in other possible forms. To date Blast Theory has only used some of the content in *Riders Have Spoken* (2011) - a touch screen display for the *Growing Knowledge* exhibition, shown at the British Library between the 12th of October 2010 and the 16th of July 2011. Something like 300, out of 20,000 recordings, have been used to create *Riders Have Spoken*. Blast Theory might, or might not, use more of *Rider Spoke*'s database in the future to create new digital artefacts.

Rider Spoke's database is populated by audio files recorded by previous participants. When a participant uses the screen (mobile interface) to choose the person to whom she wants to listen the voice of the person who left the message in that precise location is effectively acting as a voice-over and changes the experienced physical space for the participant. Just as our experience and perception of a landscape is changed if we listen to music while looking at it, so our experience and perception of where we are is changed by our listening to unknown voices who have chosen to talk in the same place. I see here an aesthetic of multiplicity that pushes towards a constructivist idea of perception where there are as many places as observers. The messages that are saved around a location are growing in number (the more people leave a message, the more options there are) and they are also not pre-determined by the authors of *Rider Spoke*. Acting as facilitators, or 'staging a conversation' (Dovey and Rose, forthcoming), Blast Theory designed a program to populate a database, but the content and the size of the database is not pre-authored.

Can we say that *Rider Spoke* is an *interactive* experiential documentary rather than simply being *reactive*? Strictly speaking *Rider Spoke* is a *reactive* documentary, in the sense that once the participant presses the name of a person onto the portable screen the link always goes to that single person's message. But if we shift our attention from a strict user-input/machine-output point of view, and look more closely at the context of the user's input, we realize that she could have stopped cycling in a thousand places to listen to a message. If we look at the location as a form of input, then *Rider Spoke* becomes *interactive* – as the input is not pre-determined by the authors. If we look at recorded comments as input, then again *Rider Spoke* is interactive. In a locative and participatory project it becomes more difficult to distinguish between input and output. Is the input the rider's position or the screen that she has to press to listen to a message? Since, on a specific spot, the rider is both listening to other people's messages and also recording her own message, she becomes both an input and an output. She is an observer and she is observed. In this way *Rider Spoke* becomes a *dynamic system* (Dubberly, Haque and Pangaro, 2009:71) as it influences the environment around it – or at least its perception from the participant's point of view. By leaving a message the rider adds a dimension to such space and by listening to other people's messages she changes the perceptions of her chosen space. The *place* becomes *space*, following de Certeau's terminology, but it is a collaborative space, open to a multitude of points

of view. I would say that experiential documentaries, such as *Rider Spoke*, can be both *reactive* and *interactive*. This dual characteristic of open database and closed screen interface is what makes *Rider Spoke* an interesting case study of Living Documentary.

Rider Spoke through the lenses of the Living Documentary

As seen in chapter two, a digital interactive documentary differentiates itself by its modalities of interaction, its levels of autopoiesis and the heterogeneity of the elements that assemble it. It is claimed in this research that those specificities are present in all interactive documentaries, which have been called *Living Documentaries*, but that each digital artefact combines those aspects in a unique way.

This sub-chapter will therefore be dedicated to determining what type of Living Documentary *Rider Spoke* is. As in the previous chapter I shall begin by identifying the dominant set of heterogeneous dimensions whose relationships define *Rider Spoke*. I will then question how open the system's logic of self-regulation and self-making is, in order to understand its level of openness to change. Next I will focus on the ability of changes that *Rider Spoke* makes possible and therefore look at the *Rider Spoke*/participant/environment structural coupling. My quest will be to concentrate on the way this structural coupling affects the identity of both *Rider Spoke* and its participants. Finally I will look at what stabilises, or destabilises, *Rider Spoke* and will question when and how it stops functioning. In my analysis I will refer to my own documented[25] experience of *Rider Spoke* in London, October 2007, and will also use the results of a questionnaire that was distributed to participants returning from their ride in Liverpool – where *Rider Spoke* was staged in February 2010.

The four main points of analysis are consistent throughout all the case studies. *Rider Spoke* will be examined by asking the following questions:

1. What are the main components and dimensions of *Rider Spoke*?
2. What is its organization and can it change or evolve?

[25] I participated to *Rider Spoke* London in October 2007 and filmed my experience while I was going through it. This 27 minute video, documenting my experience, serves to ensure that my original impressions are accurately conveyed.

3. Do those changes affect *Rider Spoke*'s identity, and/or the identity of the systems that are related to it?
4. What stabilises it or destabilises it, and what would cause *Rider Spoke* to halt or die?

But, before going through such questions, I first need to introduce the methodology behind the questionnaire that I distributed to the participants of *Rider Spoke* Liverpool, and that I will use in this chapter to sustain my analysis.

Rider Spoke's questionnaire

During the week of the 12th of February 2010, fourteen participants (seven men and seven women) filled in a feed-back form about their experience of *Rider Spoke* Liverpool. I decide to do a questionnaire, rather than personal interviews, because it was impossible to plan when people would come to participate throughout the week and it made no sense to just go there and wait. Also, a written questionnaire suited the introspective mood that the ride had probably inspired. The questionnaire was handed immediately after riders return. The questionnaire, which is available in the appendix, was anonymous and composed of four sections.

To start with the participants were asked their gender and their age group. This was to explore whether these two elements might have some influence on the enjoyment of the piece. The first question asked participants to describe their experience of *Rider Spoke* in their own words. This question led to a second one that asked riders to describe the feeling that the experience had generated. The distinction, in these two first questions, between describing an experience and describing the feelings it generated was intended to make participants aware of the affects it had on them. Question three re-enforced question one by giving a choice of eight possible descriptions of *Rider Spoke*. Through this list I wanted to see if participants were placing the project in any clearly defined genre (such as art project, game, documentary or simple bicycle ride).

The second part of the questionnaire wanted to know if participants had noticed anything new to them during the mediated exploration of the city that is *Rider Spoke*. This could have been something about the city, something that they did not know before or maybe the emergence of a particular emotion. The idea of novelty was important to me in order to evaluate the destabilising effect that *Rider Spoke* might

have had on participants. Where they learning something through it? Were they noticing any change in themselves or in their surroundings?

The third part of the questionnaire wanted to establish the different type of impact between the interface and people's comments. With such question I wanted to see if participants had been inspired more by the pre-designed parts of the piece (the interface and the questions) or by the collaborative content of the piece (the comments and thoughts of other participants).

Finally, the last two questions were recapitulative. Two totally open questions such as "What did you like best (and what did you like least), about *Rider Spoke*'s experience" allowed participants to summarize the ride and also to add anything that I had not anticipated or requested.

The fourteen people who completed and returned the questionnaire were from a wide range of ages, equally divided between men and woman. Not knowing how many people took part over the whole week, I cannot vouch for how representative this sample is. For this reason I will confine my use of the responses to a contributory role in my analysis of *Rider Spoke*. Some responses contributed to forming hypotheses, and other suggested new angles worth analysing, nevertheless I use the results cautiously.

I can now proceed with the first of the four questions that will be developped in this chapter to analyse the Living Documentary characteristics of *Rider Spoke*.

1. What are the main components and dimensions of *Rider Spoke*?

As seen in chapter two, *dimensions* have been defined as a network of relations (which can be of any sort) that links the components that make the Living Documentary possible, and *components* the elements that form the Living Documentary and that acquire sense and function depending on the dimension that contains them. Most Living Documentaries will have components in common (all interactive documentaries use coding, platforms and interfaces and they all involve, at some stage or another, an authoring voice and some interactors, if not users) but some components will be more relevant than others depending on the specificities of the work.

It is only through a continually moving balance between the city space, Wi-Fi technology, the bicycle, the interface of the mobile device, the role that the

participant is willing to take and the space of conversation designed by Blast Theory, that *Rider Spoke* becomes alive. Its own identity is the result of a constantly readjusting metastable equilibrium that changes with each user, depending on the locations selected, on the weather, on the download speed of audio messages, on their content, on the functioning of the mobile interface, on the curious looks of passing spectators… Since experiential documentaries are always experienced in physical space, "space" becomes a dominant component that, linked with "interface" and "participant", creates here a dominant dimension of analysis.

1. the interface(s)

Referring again to Manovich's definition of interface as 'a particular configuration of space, time, and surface articulated in the work; a particular sequence of the user's activities over time in interacting with the work; a particular formal, material and phenomenological user experience' (Manovich, 2001:66), in *Rider Spoke* we see two levels of interface: the city and the screen of the handheld computer (Nokia N800). The navigation on the portable computer is designed for touch screen. Blast Theory has therefore designed a very simple interface, which might look rather childish, but which is very intuitive to use. The interface allows the participant to check if the location she has chosen has not been used before (because only one message can be recorded for any one GPS position). It then invites the user to listen to a question and to record her answer. The user has the choice to listen to other people's messages (that have been recorded in a nearby position). But, since the user is in a city environment, she can easily be distracted.

In my experience of *Rider Spoke*, the digital interface was simple to use but rendering the GPS positioning was slow… sometimes annoyingly slow. The time it took for the next screen to load affected the degrees of immersion I felt. During that time the wider interface, the city, would come into the forefront. A flashy car, an acquaintance, a shop… anything could have distracted me from *Rider Spoke* – or could have added a layer of discovery to the city that *Rider Spoke* documents. On those occasions, when the new screen appeared immediately, I felt as an explorer into a city that looked different to me, but when the rendering time was slow I felt that I was in a pervasive game that was trying to be too clever, and I got frustrated. In that context immersion needed speed to create fluidity. When technology does not work smoothly it comes to the foreground leaving the narrative experience in the

background. A participant in my small-scale questionnaire said that the thing that he liked least in *Rider Spoke* was its "clunky interface" (male n.2)[26]. And yet, is the detachment from *Rider Spoke* not the price to pay to reconnect with the city? People who had problems with the interface had a chance to connect with their surroundings. People who had a fluid experience managed to connect with a new mediated city. Whether this was intentional or not, the existence of levels of interfaces gives *Rider Spoke* a richness of opportunities that makes it a particularly dense experience.

On the other hand the physical space of the city also acts as an interface in *Rider Spoke*. Here the common understanding of the word interface as 'a surface forming a common boundary of two bodies, spaces, or phrases: the place at which independent and often unrelated systems meet and act on or communicate with each other' (Merriam-Webster, 2012)[27] can be more useful than Manovich's notion of digital interface. Merriam-Webster's definition puts the emphasis on the interface as a space of communication between independent systems. While the computer interface only offers a limited number of communication between the user and the machine (listen, record, select and go to next), the city offers all its ground and inhabitants to the participant. Streets, squares, gardens and building become potential locations in which to stop and listen to a new message. If we see the city with its levels of physical and virtual flows, where hardware and software all participate in the stability of its eco-system (Page and Phillips, 2006) then the urban space where *Rider Spoke* takes place is a meta-interface that is as important as the mobile computer's interface. The navigation is the ride, the context is the city, the graphics are the buildings and the people walking in the street. The rider is the mouse, the view is the screen, the noise is the audio, architecture is the style and the breaks of the bicycle are the "next" button. When the participant has cycled for long enough and has decided where to stop, she effectively has taken her decision. Pressing the "listen" button on the mobile interface is the second part of a process that began in the city-rider relationship. Before the rider clicks on the "listen" button, she has

[26] The questionnaire that I designed was anonymous. The only demographic references I asked for were the gender and the age group of the person (thinking that it might be relevant for the interpretation of their answers). As a result, in order to quote answers in my research, I have numbered the participants from one to seven (seven men and seven women). The participants will therefore be referenced here with a number. All filled in questionnaires are available in the appendix of this thesis.

[27] From http://www.merriam-webster.com/dictionary/interface, accessed 24.02.12.

already interacted with the city, by choosing a location, and with the media, by choosing an option on the touch-screen. This choice will start a new loop of changes where "the city" and all the parts of which it is composed - "streets", "traffic", "buildings", "people", "weather" etc... - will affect the user/participant in different ways.

2. the city

If I have linked the component "city" to "interface" in the previous paragraph, I would like now to link it to such other components as "people", "weather" and "buildings" or "streets" in this section. Five out of the fourteen people who filled in the questionnaire about *Rider Spoke* Liverpool, declared that what they liked the least about the experience was the cold weather. Three people felt disturbed by other people's glances, staring at them while cycling with a strange digital device attached to their bicycles (male n.3 and n.4, female n.2). Interestingly eight, out of fourteen people, said that they noticed elements of the city they were normally not aware of: certainly buildings and new street, but also "so much litter" (female n.3), "bad streets" (male n.7) and "very bumpy cobbled streets" (female n.4). For male n.4, "the city felt more intimate, like one big bedroom", indicating a certain fluidity of the experience.

Although fourteen people are too small of a sample to draw conclusions about *Rider Spoke*, it is interesting to note that, through this unusual ride, people were made aware of the materiality of the city (cobbled streets) and of social behaviour (it is odd to speak to a recordable device while on a bicycle in a street). In other words the "new" city that emerges through *Rider Spoke* is the one people knew before but is now enriched by a specific situated knowledge where streets feel different, because cobbles are more noticeable when one cycles on them, and people stand out from the crowd when one acts bizarrely. It is also a city that felt different because *colder* – it was February, but also "cold" feels different when cycling than when walking, or sitting in a bus. The component "city" is therefore actively linked to the component "bicycle" that is analysed below. Another crucial element which allowed this "new city" to emerge was the set of recordings made by other participants. The city looked different to people because they were listening, and being influenced, by what other participants were saying about it.

3. the media(s)

The media is a component that affords some relations more than others. From the earlier section it should be clear that it would be simplistic to see the portable touch screen device (Nokia N800) - that acts as an interface between the user and *Rider Spoke*'s database of messages - as the only media involved in *Rider Spoke*. Without wanting to unnecessarily complicate the notion of media - including in it the user's body, the social codes in which she navigates, the city and other actors - I will nevertheless concentrate on two types of media that are determinant in creating *Rider Spoke's* experience for the user: the bicycle and the portable device.

3.1 the bicycle

It could be argued that a bicycle is a mean of transport, and not a media. In effect it transports a body through a space and does not carry communication content. If we accept the definition of media as 'institutions and organisations in which people work (the press, cinema, broadcasting, publishing and so on)' and as 'the cultural and material products of those institutions' (Thompson, 1995:23-24) then obviously the bicycle does not account as a media but, if one thinks of media in a McLuhan-esque way[28], as a technology that changes the natural relationship between the sensing part of the body and affects 'the whole psychic and social complex' (McLuhan, 1968:11), then *Rider Spoke*'s bicycle can be seen as a vehicle that acts, in a way, as a media. It is quite clear that *Rider Spoke* would feel, and be, completely different if participants were walking rather than cycling. The speed, the feeling of freedom, maybe the fear that comes with cycling, transforms the city into a fluid, maybe cold and, at times, scary place. If a participant declared that cycling made the city feel "less intimidating and more accessible" (male n.1), another wrote on my questionnaire that "the cycling experience was a way to actually look at/explore the city properly with no distractions" (female n.6). It is through the bicycle that the cobbled street emerges to the participants. Those cobblestones were there before, but were less apparent to pedestrians. Once again, the environment coupled with the man-bicycle assemblage allows the emergence

[28] McLuhan states that 'media effects are new environments as imperceptible as water to a fish, subliminal for the most part' (1969:22). It is to this idea of media as invisible shapers of our perception and understanding of the world that I refer here.

of the new. The bicycle's movement necessitates what Richard Coyne has called a new 'tuning' (2010:XV) with both space and time. Tuning with the city means adjusting to its speed, to its traffic and to its cobbled streets. But I would add to this that the city tunes back to us: while I tune into the traffic by adjusting my position and moving in front of the cars at the red light, the traffic adjusts to me and overtakes me once the light turns green. The bicycle is not a neutral media: it determines a series of possible tunings with the environment that, in turn, adjusts to the bike itself.

3.2 the portable touch screen device (Nokia N800)

Rider Spoke is a locative game that involves a mobile device mounted onto a bicycle and a headphone set with microphone. The mobile device is only meant to be used when the bicycle is stopped (for security reasons). The first command of the artwork ("find a place that you like, stop and explain why you choose it") was probably dictated by the affordances of the machinic assemblage that is a man on a bicycle with a touch screen device: it is both difficult and dangerous to cycle and operate a touch screen at the same time. Here the media has directly influenced both the interface (which needs to be simple and easy to navigate) and the nature of the tasks of the piece (first find a space where to stop, only then say something about it). The rhythm of the work (first ride, then communicate), the feeling of exploration followed by a moment of reflection and communication, are totally dictated by the mix of medias that are used on *Rider Spoke*. When philosopher Brian Massumi says that the notion of movement needs to be understood as 'qualitative transformation' (2002:3) he means that it is not the displacement from A to B that counts in movement but what happens during the in-between. What happens in *Rider Spoke* between one question and the other? Are moving and stopping two separate states of being or are they the evidence of the inevitable flux of existence in a topological space? For Massumi 'indeterminacy and determination, change and freeze-framing, go together. They are inseparable and always actually coincide while remaining disjunctive in their modes of reality' (2002:8). Seen from this point of view the sequence of riding, stopping and then listen to/record a comment gradually leads the participant through different modes of reality that are all part of an *affected experience* – defined at

the beginning of this chapter as wider than just the felt experience of the senses. When the rider stops, she steps out of transformation and temporally gets 'in position' (Massumi, 2002:6) – as does Zeno's arrow when it hits the target. Only then the relation between motion and rest can be processed. Now is the moment for communication, as knowledge has emerged and expanded from such dynamic relation with the environment. Psychologist James Gibson makes a direct link between knowledge formation and environment, 'knowledge of the environment' he says 'surely, develops, extends as the observer travels, gets finer as they learn to scrutinize… and gets richer as they notice more affordances. Knowledge of this form does not "come from" anywhere; it is got by looking, along with listening, feeling, smelling and tasting' (Gibson, 1979:253). Now that the participant has stopped, having been in motion, her transformation is still present. In that glimpse of time where the past is still present and the future is being created, the participant can record a message that will both create and describe a state of being.

Rider Spoke mainly communicates through two forms of languages: a graphic interface allows choices to be made, and communicated, and spoken language delivers the narrator's text and carries other's participant's contributions. The use of sound is particularly interesting in *Rider Spoke* because it only makes sense in its context, with the difference that in this case the context is the city. Contrary to the use of sound in films or documentaries, where crafted editing makes sure that sound is always linked to a precise image in time, in *Rider Spoke* sound is to be listened into a 3D space where the listener is free to glance at what she wants. Sound is here giving meaning to a landscape which is itself giving meaning to the message. The circularity between the city that inspired the message when it was recorded and the listener who is now watching the city differently, because of the message that was left by someone else, creates a dynamic where city-recorder-listener-city are linked in a co-constitutive manner. The city and the participant co-emerge while they interact through *Rider Spoke*. *Rider Spoke* itself is changing (augmenting its database) during this process. No element is fix in time if we look at *Rider Spoke* as a Living Documentary that has an autopoietic relation with its environment.

4. the space

Space is a dominant component of *Rider Spoke,* since physical movement is situated in physical space. More interestingly, we can consider *Rider Spoke* as inhabiting several types of spaces. We could see a rider moving from A to B in a Euclidian space - where a displacement of body positioning has happened. But, during such transfer physical, mental and environmental changes have happened: while riding, a 'qualitative transformation' (Massumi, 2002:3) of affect, thoughts and emotions has been in constant process. The potential transformations of the rider and its environment have created a 'topological space' (Massumi, 2002:134), a space of multiple possible forms, a space of becoming. Out of this space of potentiality emerges 'the actual (…) the effect of the momentous meeting, mixing and re-separation' (Massumi, 2002:136) that becomes a sensation[29]. Passing from affect to conscious sensation is not just the result of the passing of time (the famous half a second of time that our body needs to process sensorial inputs) but the result of movement through different co-existing spaces: Euclidiean and topological spaces, as seen before, but also mental and Hertzian spaces which, although not tangible to our senses do affect us and our environment[30]. What I have called *affected experience* is the result of movement within a multi-dimensional space, that I will here call *affected space*, is a space that accepts the co-existence, and the relationship between physical, energetic, mental and potential entities.

When deciding to use Wi-Fi Fingerprinting technology[31], Blast Theory purposely avoided Cartesian space. Because few mobile devices in 2007 had GPS

[29] Where sensation is the result, and the moment, where probability, potential now and virtual, as absolute potential in atemporal space, happens (Massumi, 2002:136).

[30] Where Hertzian space is populated by waves and electromagnetic fields that that we cannot perceive and yet affect us. In *Hertzian Tales*, interaction designer Anthony Dunne explains how electronic objects are changing our understanding of space and boundaries. 'We are experiencing a new kind of connection to our artefactual environment. The electronic object is spread over many frequencies of the electromagnetic spectrum, partly visible, partly not. Sense organs function as transducers, converting environmental energy into neural signals. Our sense organs cannot transduce radio waves or other wavelength outside the narrow bandwidth of visible light' (Dunne, 1999:85). If we could visualise objects in Hertzian space we would discover their overlapping and there absence of clear boundaries.

[31] A GPS receiver calculates its position by precisely timing the signals sent by three, or more, GPS satellites. Each satellite continually transmits messages that include the time the message was transmitted, its orbital information, and the general system health and rough orbits of all GPS satellites. The receiver uses the messages it receives to compute the distance to each satellite and determines its position by calculating its latitude and longitude. In Wi-Fi Fingerprinting no precise intersection between a latitude and longitude is being calculated. The devise constantly scans for visible Wi-Fi access points, recording their MAC addresses. Each new combination of MAC

enhancement, *Rider Spoke* uses Wi-Fi Fingerprinting technology to track the rider's movements. While GPS technology has a margin of ten meters of error in finding the exact position of a GPS enhanced device, Wi-Fi Fingerprinting can track movement but cannot determine where the device is within a specific Wi-Fi zone. This lack of precision is actually seen as a potential creative space for Blast Theory. In a recorded conversation Matt Adams (*Rider Spoke*'s co-author) told me "we were more interested in context than positioning, so we used Hertzian space rather than Cartesian space. In Wi-Fi Fingerprinting the system of location is mutable and therefore it allowed us to move in a more creative space"[32].To say that context is more important than position means that Blast Theory wanted participant to navigate in a space of proximity (Massumi, 2002) rather than in an Euclidian space.

By cycling the participant appropriates her *affected space*, makes geographical, imaginary and emotional connections and positions herself in a city that she builds and discovers as she rides. When asked to find a location that their father would have liked, participants will maybe cycle towards a pub, or a park, but definitively not towards GPS position N37 degrees 43.69, W 97 degrees 28.39. That kind of specific location makes no sense in *Rider Spoke,* since it is the emotional engagement to space that is at the core of the artefact. In an affected space the pub, or the park, is the result of memories, of thoughts, of perceived, and not perceived, environmental constraints mixed with the knowledge of the physical space where the rider is at that specific moment.

The strength of *Rider Spoke* lies in its use of simple questions to guide the participant into such complex space. Since the participant is now cycling with a quest ("Find a window and imagine what is behind", "Find a place where you feel good" etc…) spatial stories are being constructed, and space starts to unfold. If 'walking is a space of enunciation' (de Certeau, 1984:98), cycling too can be so. In *Rider Spoke* the participant goes from the 'pedestrian speech act' of walking (de Certeau, 1984:97) - here the rider's act of cycling – to the speech act of recording her thoughts. There is an unfolding pattern that has been carefully designed: you first feel, and therefore embody space, you get affected by it, and then you rationalise your experience by speaking about it (recording). The journey is tending first

addresses becomes a fingerprint which is linked to the last fingerprint seen. This creates a zone of possible movement, rather than a precise location point.

[32] From recorded conversation, on the 13.04.11.

towards self-awareness and appropriation of space and then into sharing of space. And yet, those phases are not separated, as they are continuous. Following philosopher William James' approach, it is perfectly conceivable to see continuity in different moments. 'What I do feel simply when a later moment of my experience succeeds an earlier one' writes James in *Essays in Radical Empiricism* 'is that though they are two moments, the transition from one to the other is *continuous*' (James, 1912:49 – italic in original). If experience is 'a process in time' (James, 1912:62) this process needs a space to root itself. What *Rider Spoke* does is to offer the city as a place to be appropriated by the participant during a set time of 50 minutes. It mediates the conditions of such appropriation of space.

Speaking at DocFest 2009's conference Matt Adams specifically insisted in this notion of appropriation of space: '*Rider Spoke* uses intimacy of personal communication devices to give each particular place used in the work a meaning' (Adams, 2009:2). Meaning is the result of embodied experience (Dourish, 2001). Practiced, embodied *spaces* become *places* (following de Certeau's and Dourish's distinction), but they are *shared places*. By allowing other people to listen to other's people's comments what was an *affected space* opens up: it becomes inhabited by other people's contributions, it becomes related to them, and therefore space also becomes *shared* and *collaborative.*

5. the author(s)

Who is the author in *Rider Spoke*? While Blast Theory has obviously orchestrated the rules of the game, deciding for a specific logic of interaction, its authorial role is not about creating a narrative, but rather a set of possibilities and a mood. In *Rider Spoke*, says co-author Matt Adams, 'we established a high threshold to participation (you must cycle through the city), a strong sense of mood (through the design of interface and music), reciprocity (the female voice of the game speaks personally and revealingly) and context (the participant's choose where to record) to increase the likelihood that what is recorded is meaningful' (Adams, 2009:2). As a result, the quality of the narrative relies on the affective strength of the stories and not on their collective dramaturgy. The authors are multiple, and they "work" separately, yet they create a meaningful experience that can be at time quite moving. Emotions are key in *Rider Spoke*, people share their memories, their feeling and sometimes their fears. A participant declared feeling relieved about "answering questions without concern of

being embarrassed" (female n.4). Another felt that *Rider Spoke* allowed her to "explore her own fears" (female n.3). *Rider Spoke* does not construct a fictional narrative; it is a real documentation of how people feel *about* and *in* their city. It is about their dreams, their wishes, their solitude and their geographical memories. The collaborative aural mosaic that is *Rider Spoke* accepts a growing numbers of authors - the work runs for one or two weeks during which testimonials keep accumulating. This means that there are never a fixed number of authors, but only an evolving group of authors.

So what is the role of Blast Theory? Are they the orchestrators, the authors, the facilitators or the observers? We could argue that they are all of those mixed together. *Rider Spoke* is the result of the relationships that it forges, and that forge it. Regardless of the master plan that Blast Theory had, the work does not exist without the voices of its contributors. But those contributors would have nothing to say if they were not instructed to look for something. No message would feel sincere, or interesting, if the city, the bicycle, the time of day and the smooth voice of the narrator did not inspire ideas, create emotions and encourage the emergence of feelings and memories.

The authors of *Rider Spoke* are therefore multiple, and they interact – most of the time without being aware of it (does the city know that a bicycle is bumping on its cobblestones? Does the bicycle know that a rider is feeling cold because of her cycling speed?). If Blast Theory owns the original intention of the work and has made it possible, it is then the city, the weather, the bicycle, the participants and the sunset that makes it a compelling and rich experience.

6. the user / participant / contributor

Speaking at DocFest 2009[33] Matt Adams, co-creator of *Rider Spoke*, made it clear that he did not like the word "user generated content". "User", he said, 'suggests that people are utilitarian inputs to a system, "generated" posits that they produce things through some basic process (think of a random number generator) and "content" is an awkward and ugly syllogism for the ways in which the public contributes' (2009:2). He therefore proposed the term 'publicly-created contributions' (ibidem).

[33] An article about his speech can be found at http://www.blasttheory.co.uk/bt/documents/DocFest_2009_Matt_Adams_Pervasive_Games_Case_Study.pdf. Accessed 25.09.10.

Why does it make a difference to speak of contributors rather than users or participants? *Rider Spoke* is an experience, not a tool to do something. You cannot "use" it; you can only be part of it. The work is designed in such a way that before listening to other people's messages you have to record your own one. So in order to participate you need to contribute. If the participant wants to go through *Rider Spoke,* the sequence of her acts are directed by Blast Theory: she first has to wear her earphone, listen to the first message, ride into the city to find a location she likes, stop there, listen to the question, record her answer, listen to other people's answers, listen to the next question, start cycling again, find her location to stop etc… So, where is the participant's freedom in what appears to be a rather linear process? What looks like a rather reactive input-output pattern is actually slightly more complex. First the contributor is both the input and the output of the piece. When she leaves a message she provides an input to the system, but when her message is heard it becomes an output of *Rider Spoke*. In a rather cybernetic way the participant is both observer and observed. This is an essential pattern of Living Documentaries: they can have reflexive behaviours and they can also have a mix of positive and negative feed-back loops mechanisms. When the participant is observing the city to find inspiration, she is observing the interface to find out what to do next, she is observing other people's voices when listening to their recordings, but then she is observed by the city passengers while she weirdly plays with a computer mounted onto her bicycle, she is observed by others when they listen to her recordings, and to a certain extend she is observed by Blast Theory when they monitor the content of their piece. In *Rider Spoke* there are no interviews done by an "external" observer-director. Its content is populated by contributors rather than interviewees so that each participant is obliged to go through this observer-observed loop. This loop tends to stabilise *Rider Spoke* (if we consider that its goal is to populate its database) but it also destabilises it (if we consider that its form and content is in constant expansion).

2. *Rider Spoke*'s organization

How is *Rider Spoke* organized? We shall examine the way in which the relationships between the components highlighted in the previous section (platform, author, contributor, space etc…) can be said to form what we would identify as *Rider Spoke*. I have identified *Rider Spoke* as a Living Documentary - that is to say that it is

interactive, it shows levels of autopoietic behaviour and can be seen as an assemblage. I have also selected *Rider Spoke* as a case study of experiential interactive documentary because the main mode of interactivity that holds it together is based on embodied spatial interaction[34]. But what makes it itself specific, and unique, within the large family of Living experiential documentaries?

In the same way that each living system is unique, although it belongs to a species, we shall now see how *Rider Spoke'*s relations of interiority and exteriority make it a unique system. Let us first concentrate on its relations of interiority: how is each element that composes it linked to the others, in order to create a whole?

Setting aside issues of user experience and authorship, let us begin with the form that this example of Living Documentary takes at the start of its two-week life. When the first bicycle is picked up for the first time, *Rider Spoke* is a system with instructions but with no participant content. Its computer interface has been designed to give clear instructions to its rider. This is one level of internal relations: its code, its computer interface and its instructions for users. This is overlaid with another level of relationships linking contributor, place and the portable computer. This level will only work if the participant feels engaged in the experience. She needs to feel comfortable with the first set of relationships in order to add her contribution and add one level to *Rider Spoke*. Her contribution will then allow the work to grow provided that it is perceived as meaningful to other future participants. Meaningfulness is important for *Rider Spoke*. The work has been designed to create a feeling of intimacy. Blast Theory's co-owner Matt Adams is proud to say that people's contributions are nearly always 'meaningful and heartfelt. Often they are moving and compelling' (Adams, 2009:2). This is not the result of good luck, it is the result of *Rider Spoke*'s internal relations: participants have to ride a bicycle (which is meant to relax and inspire the rider), at a specific time (the ride is experienced at sunset, when the diminishing light creates an atmosphere of unclear boundaries), a time that has a social context (sunset is normally the moment when people stop working, which means that a ride at sunset will happen in a specific downtime mood), they listen to a voice (which is soft, relaxing, and nearly motherly), guiding through questions (which are increasingly private, but also open enough not to be

[34] Where embodied interaction is not only interaction "beyond the desktop" but, as argued by HCI scientist Paul Dourish, an interaction that 'includes both physically realized and socially situated phenomena' (Dourish, 2004:115).

threatening)… all those elements create a specific atmosphere that allows the emergence of meaningful content. But even if *Rider Spoke*'s internal organization is crafted to create a whole, a meaningful whole, each of its components has a life of its own.

For example, let's take the participant. The participant is an active element of *Rider Spoke*'s organization. Without her, content is not created and the interface is not activated. The relations of interiority of the piece clearly define which role she has to take (she has to understand how to use the portable interface, ride the bicycle and verbalise an answer) and yet, the participant is a free and dynamic system. *Rider Spoke* cannot predict what will happen during her ride. The participant exists within but also outside of *Rider Spoke*, her identity is constantly forged through social, cultural and physical interactions. If at any moment of the ride she meets a friend in the street she might stop and become "a friend" rather than a "*Rider Spoke* participant". If this should occur, she will become temporally external to *Rider Spoke*'s assemblage. She could decide to follow the friend to the pub and stop the experience. If she returns to *Rider Spoke*, maybe changed by the conversation she had with her friend, maybe in a different mood, maybe now in a hurry to finish her ride, she will re-enter *Rider Spoke* as a different entity. Since *Rider Spoke* unfolds in physical space, the relations between its elements are significantly more complex than in a totally constructed virtual space. At each moment the balance between internal and external relations is renegotiated. *Rider Spoke* is the result of a dance between multiple elements that are situated in a hybrid space that is both virtual and physical where 'meaning is constructed on the fly' (Harrison, Sengers and Tatar, 2007:11). Its content is constructed when its internal organization and the relation of exteriority of its elements are in phase and do not clash. Such content is the result of 'situated knowledge' (Haraway, 1991:581) - which is itself the result of 'situated actions' (Suchman, 1987:8), actions that were not planned by the authors of the piece. As anthropologist Lucy Suchman argues 'we can describe actions but we are guessing when we try to describe intent and causality behind those actions' (Suchman, 1987:78) because those are always the result of ad-hoc and in-situ circumstances.

If the dance works, then *Rider Spoke* will enter a positive loop where each participant will feed in new contributions. In order to maintain its situated meaningfulness, it needs interesting audio recordings that will inspire new

contributors. *Rider Spoke* is a self-creating entity, in the sense that it is designed to create the conditions that will allow it to grow. Its autopoietic behaviour allows it to change, but by doing so it also changes the view that its participants have of the space around them. The more people listen to other points of view about the same space, the more they will see it differently. *Rider Spoke* is a Living Documentary that affects itself and its environment and that portrays a reality that is constantly changing and constantly re-negotiated.

3. Do changes affect the identity of *Rider Spoke* and/or the identity of the systems that are related to it?

Having argued in the past section that *Rider Spoke* changes throughout its short life via a positive feed-back loop that populates its initial empty shell with user's content in constant circular expansion, I will now question how such changes affect *Rider Spoke* and its environment. How does the interdependence between human-machines-artefacts such as *Rider Spoke* create new subjectivities?

It is claimed in chapter two that if identity is always relational, and interaction is co-constitutive, than in Living Documentaries identities are co-created and constantly fluctuating, because they are dynamic systems. I particularly refer here to a vision of identity defined by Guattari as 'plural and polyphonic' (1992:1) where the heterogeneity of components (family, religion, environment etc…), including the relation to media and language leads to the production of subjectivity. My hypothesis is that in interactive documentary the active role of the user is what constantly 'resingularises' her (Guattari, 2006:7). When the interaction with the artefact is dynamic, and not just reactive, the changes in the user affect the form of the artefact itself and the artefact can be seen as autopoietically open. The more changes are possible and supported by the organisation of the artefact, the more substantial will be its transformation and, since a Living Documentary is constantly linked with other assemblages, those will also change.

When I experimented with *Rider Spoke*, I went to London's Barbican cultural centre by tube. I arrived as a pedestrian and left as a bicycle rider. I am not an experienced city rider. When I took the helmet in my right hand, and the mobile device in my left hand, I felt confused… how was I meant to get on the bicycle now? Three states of minds had already gone through me: excitement (in the tube), curiosity (at the

Barbican) and slight panic (once given the bicycle). My identity had gone from tranquil commuter, to curious tourist, to uncertain rider. A patient member of Blast Theory took the time to assist get each prop into its correct place and I started to pedal outside the building. The voice in my headphones had prompted me to ride around and to find a quiet place in order to stop and listen to the next message. The commands were both on the Nokia's phone screen and on the voice that was softly guiding me into this journey.

Fig. 28 - One of *Rider Spoke*'s questions (http://www.flickr.com/photos/25968376@N02/2455411972/)

Unlike hypertext architecture, where the answer to the question needs to be selected from pre-ordained choices, *Rider Spoke* leaves the user free to find any space she wants in London. While looking for "my spot" I became "just a cyclist", but a cyclist searching her environment: which place do I prefer, which one should I choose? By searching for my own answer, by asserting my taste and my priorities, I create 'new modalities of subjectivity' (Guattari, 1995:7). My relation with *Rider Spoke* allows me to focus between the several selves that constitute me. In point of fact, *Rider Spoke's* questions act as the 'refrain' (Guattari, 1995:16) that gives me unity in that particular moment and gives sense to the chaos around me. And yet, what happens between the moment I listen to the question and the moment I select a place to stop in? Do "I" decide to stop, is it "the city" that prompts me to stop, or are my actions 'situated' (Suchman, 1987:50), the result of a constant dialogue between me and my environment?

I choose Spitalfield market because "it felt right", it was an affective choice. I did not choose a precise building, I did not choose an x-y-z Euclidian position, I chose a place that made me feel good without knowing where that feeling was coming from. While I was cycling I was fluctuating in a 'transitional space' (Massumi, 2002:183) where I was changing as I was moving. Time, seen as minutes and seconds, is irrelevant here. The quantitative duration of my exploration says nothing about the qualitative transformation that happened through it. 'Past and future resonate in the present' (Massumi, 2002:200); I could wander in the city because my previous knowledge of it allowed me a certain flow of movement, and yet the need to stop somewhere was impinging on my present by making me look for a stopping place. Somehow, and I will never really know why or how, Spitalfield market called me, allowed me, to stop. I stopped for something that I could not see, as perception is environmental (Gibson, 1979).

It is only when I stopped that I could start questioning my choice. To be more precise, it is actually because I had to explain my action that I could start calling it a choice. I was asked by *Rider Spoke* to record an answer. At that precise moment I had shifted from an affective mode of body language to a more conscious mode of words language. The act of recording my thoughts made me both self-conscious and public. My quest for sense "linearised"[35] me. Because reflections, thoughts and sensations are always mixed, their balance constantly changes. I knew that my voice would become available to others so my introspective mood changed into a performative one. I was not browsing anymore, I was communicating. I became a witness, a reporter, a broadcaster. Psychologist Jerome Bruner says that 'our sensitivity to narrative provides the major link between our own sense of self and our sense of others in the social world around us' (Bruner, 1986:69). My recording was both a way to pin down my sense of self in that precise moment and to assert my presence to others within *Rider Spoke*'s community. Whatever had been my 'pure experience' (James, 1912: 23), that mixture between perceptual and non-perceptual experience that I could never be fully conscious of, I now had to create some coherent narrative that would singularise me as a *Rider Spoke* participant. My recording is the result of a 'situated action' (Suchman, 1987:50) that uses a

[35] In the sense that making a narrative aural statement requires the use of the linear mode of language.

connected ‘space of flow’ (Castells, 2010: xxxi) to make public a normally private moment of consciousness.

The one-to-one relationship that I had with the built-in microphone of my headphones was private enough to allow introspection. In the street, nobody was watching me. I wandered what *Rider Spoke* was all about, I questioned the whole experience, but then I was curious about the next question so I moved on and recorded my answer. When the interface allowed me to listen to other people’s messages I suddenly realised what *Rider Spoke* was all about. It was not about “me”, but about “us”- which included London as a participant. I listened to the message that a “Sonia” had left in the same square. She had chosen that spot for totally different reasons, and yet her utterance was relevant to me, as we were sharing the same spot of town and I was now contemplating the square with her point of view. I had added a layer of emotional memories to what my eyes were watching. Space was layering itself with stories and observations that made it more complex, yet more alive. To my eyes, the square had changed identity. As James Gibson wrote in *The Ecological Approach to Visual Perception* ‘the observer and his environment are complementary’ (1979:15). Space was not only about real estate and architectural statement but also about ‘moments of encounters’ (Amin and Thrift, 2002:30). The city had become social and layered with lives, emotions and memories that were now more tangible to me. It had become a richer place, a space that I could never totally grasp because it was created by an infinity of points of view.

Had the city changed too, while I was going through my multiple identities? I will take Von Foerster’s constructivist point of view here: ‘once the postulate of an “external (objective) reality” disappears it gives way to a reality that is determinated by modes of internal computations’ (1981:261). If we accept that there is no external objective reality but only points of view, then the city had become larger, richer and more complex to my eyes. If perceiving a place is an enacted experience in time, then moving through it and listening to other visions of it can only change its perception. *Rider Spoke* puts in practice second order cybernetics’ cognitive ideas of enacted perception and creates a ludic experience that uses embodied action (cycling, recording etc…) and first person consciousness[36] to create a reality that emerges from the structural coupling with the environment and that is “multiple” - because it

[36] Every recording is made from a first person point of view. People are asked to express their state of consciousness at a precise moment in time.

consciously takes in consideration a multitude of other points of view. 'When you perceive an event unfolding', writes cognitive scientist Alva Noë, 'it is not as if you occupy a dimensionless point of observation. You *live through* an event by coupling with it' (2006:4). The coupling here was between me, the city and other's participants messages. The city had changed because to my eyes it was not the same. The city had changed because I was moving differently in it. The buildings had not moved, but I would see them differently.

And what was happening to *Rider Spoke* during my journey through it? My answers, recorded in a precise location, had added content to its database. *Rider Spoke* had now one more voice, and one more choice for its future users. Its graphical interface would have to evolve for other contributors in order to allow the name "Sandra" to figure in its small screen. Both in terms of graphic and content *Rider Spoke* had evolved. Its internal organization had not changed but its form and content had. Even if *Rider Spoke* is not a conscious self it still has its identity[37]. If at different moment its options and constitutive elements have changed, then its identity has changed too.

What does *Rider Spoke*'s organisation say about our being in the world? How does the mixture of pre-determined questions and evolving database of answers position us? *Rider Spoke* represents a world that is predetermined in its rules, but where there is freedom of expression. The individual is guided, restricted and mediated in her encounters with its environment (there are specific questions, few options and a digital device, with all its constraints) but in the moment of recording the participant has the power of expressing her own truth. Contrary to the hypertext mode, where the user had freedom of exploration and interpretation but no freedom of action, here the human being is portrayed as responsible of her own thoughts and actions. More importantly *Rider Spoke* depicts a world where each voice has a political implication as it influences other points of view. Only put together, they create a whole that is multiple.

[37] For psychiatrist David Galin any dynamic system (even a non-conscious one) has a point of view, which is to be understood as 'the total set of possible discriminations an entity can make in its present state and context' (Galin, 1999:225).

4. What stabilises, destabilises, or ends *Rider Spoke*?

In looking at *Rider Spoke* as a Living Documentary I want to question when, and if, its organisation stops functioning (any autopoietic system eventually dies), and I want to question what stabilises or destabilises it (any assemblage is in constant mutation). Like any 'machinic assemblage' (Guattari, 1992:40) *Rider Spoke* is not a fixed whole, but depends on the man-machine-environment connections that give it life. This also means that if anything goes wrong in any of those connections, *Rider Spoke* is potentially at risk. If the server that stores *Rider Spoke* users' contributions was to stop functioning, if the portable handset was to fall out of the bicycle and break, if the cyclist was to meet a friend during the ride and go to the pub… then *Rider Spoke* would temporarily stop. It might not end as a system, but it would stop existing for its user. There are two levels here: *Rider Spoke*'s existence as an artefact for its authors and external observers, which we will refer to as its *global life*, and *Rider Spoke* as experienced by the participant, which we will refer to as its *temporary life*. For the participant, any technical malfunction can either stop *Rider Spoke* or make it less enjoyable. When I had to wait for several minutes for the Wi-Fi Fingerprinting system to work, I temporarily lost interest in the experience. But from a broad viewpoint, for those who might want to take an overview at any moment, my temporal lack of interest did not make any difference. Writing about *Rider Spoke* positions me as an external observer to the system (creating external relations with the project) while experiencing it makes me an internal observer (creating internal relations with the assemblage). In both positions I can influence the artefact, but in different ways, and with different implications.

Rider Spoke can be destabilised at different levels. Minor technical malfunctions can disturb the user experience but not the whole system. If a user was to be so disconnected from the work that she wanted to finish the experience, she would have to stop her ride and return to the Barbican to give the bicycle and the portable device back. Unlike the case of hypertext documentary, where the user who loses interest can stop watching instantly by closing the browser/software window on her screen, *Rider Spoke* follows the times and physical constraints of the material world. One has to take the time to return the equipment (the bicycle, the helmet and the digital device). This physical transition also means that unless there are seriously annoying technical problems, there is no real incentive to stop your experience of *Rider Spoke*

before the end as you will have to go back to the same place whether you have accomplished your assignments or not. Significantly, *Rider Spoke* is not an artefact that you can browse while you do other things. In order to take part in it you have to book a time slot and pay for it. You are committing to the experience. As with any other performance, you can walk out of it if you really do not like it, but you start it in an open and interested frame of mind.

Like other Living Documentaries, *Rider Spoke* comes to life through the interaction of its users, but in contrast to the logic of hypertext, where the user gives an order to a database but does not populate it, the participative aspect of *Rider Spoke* makes it totally dependent on its users' input. Without contributions there is no *Rider Spoke*. With contributions the space becomes richer, multiple and shared. By participating, contributors are helping building a space, rather than witnessing other people's points of view passively. The participative nature of *Rider Spoke* gives its contributors a certain responsibility. Through them a new public space emerges. This space, populated by its multiple virtual messages – transparent to the eye, but audible though a digital device – is a sort of experiential materialization of constructivists' theories of perception, where each perceiving system builds its own representation of reality. Radical constructivist Glasersfeld, puts the emphasis on both our acting role, and our responsibility, in the act of perception 'the concepts and relations in terms of which we perceive and conceive the experiential world we live in are necessarily generated by ourselves. In this sense it is we who are responsible for the world we are experiencing' (Glasersfeld, 1990:8). *Rider Spoke* empowers, and makes responsible, its contributors: they have to make a statement. By listening to others they also become aware that their contribution is *one of many statements*, as opposed to *the true statement*.

So, what stabilises *Rider Spoke*, what makes it work for the user is an ensemble of elements which, together, create *meaningfulness* for the participant. From the questionnaire filled in by fourteen participants of *Rider Spoke* Liverpool, some elements seem to have been triggers to create the introspective, and yet explorative, mood that is specific to *Rider Spoke*:

1. the nature of the question asked by *Rider Spoke*

- For female n.2, what prompted an emotional reaction was "thinking about myself and questioning my thoughts, actions and experiences".

- For female n.4, the city felt differently because *Rider Spoke* "asked you to ascribe emotions and events to different aspects of the city. [It] made you ask questions and 'seek' the answers in physical places".
- For female n.5, "by answering the questions it made me think more about my time in Liverpool".

In each of those statements, the fact of having to answer to specific questions made the participant create the link between Liverpool and themselves, so creating a meaningfulness of self-awareness.

2. the tone of the voice that asks the questions

The female voice of the narrator of *Rider Spoke* is very soft and calming. The quality of this voice seems to have provoked different emotional states depending on the participants:

- "I think I have fallen in love with the narrator" (female n.3).
- [The thing that I liked least was] "the voice of the lady who was narrating" (female n.1).
- "I found the voice over a little twee. Didn't match the very real language/style of the contributions" (male n.6).
- "I wish I had a comforting voice in my head all the time so that I was always encouraged" (female n.4).

If the voice of the narrator does not create meaning per se, it creates the mood through which the participant will interpret the city. My experience was that such a peaceful voice created a mood of freedom that allowed me to relax into a city that I do not notice when I rush from one place to another during my life as a commuter.

3. other people's answers

My experience was that listening to other people's comments is crucial in constructing meaning. Here are some contributor's reactions:

- [It was] "interesting to hear other people's thoughts and feelings regarding the questions being asked. Put my own thoughts into prospective" (female n.1).
- [What prompted an emotional reaction was] "listening other's recordings" (female n.4).

- "It is like wondering about with a group of people listening to them. But they're not there, they have been there before and left echoes" (male n.2).
- [*Rider Spoke*] is "a glimpse to other people's views of the world" (male n.6).

Listening to other people's "echoes" (male n.2) is recalled as an "emotional" (female n.2) experience that "put thoughts into prospective" (female n.1) and gives a "glimpse to other people's views of the world" (male n.6). It is by confronting personal and unknown points of view that a new meaning is given to the city and the world.

4. riding

The embodied motion of riding through space is itself constitutive of a mood of thought that allows new meanings to be created:

- "It was really therapeutic – especially because I do not usually cycle around the city. A great new perspective and a refreshing individual way to spend an hour or so in a city I love" (female n.4).
- "I wasn't cycling around the city with a plan. There's always somewhere specific to go. The cycling experience was a way to actually look at/explore the city properly with no distractions" (female n.6).
- "It not only showed me new areas of the city, but because I was cycling, my mind felt clear" (male n.7).
- "It made me relate what I was thinking and feeling to my surroundings in a way I've never had the chance to do" (female n.2).

What makes *Rider Spoke* work, and therefore stabilises it, are all the elements that make it a meaningful experience for the participant and that augment the connections between its components. Like an organ that pumps more blood when extra body activity is noticed, *Rider Spoke* grows in density when its participants fully interact with/through it. 'Embodied interaction' says Dourish 'is the property of our engagement with the world that allows us to make it meaningful' (2001:126). *Rider Spoke* pushes its participants to engage with the world physically, emotionally and mentally, in order to make it meaningful. Contrary to the *[LoveStory Project]*, seen in chapter three, where the user could only be empowered through the exploratory choice of the cut (the hyperlink), *Rider Spoke* demands an act of enunciation that

represents a political act of existence - since her participation is public and heard by others. The power of the enunciation is visible and transformative. As a result, participants who engage with the work feel "peaceful" (female n.6) "happy, windswept and contemplative" (female n.3), "peaceful, happy and interested" (female n.2), "confused" (female n.1), "part of something" (male n.2), "proud" (male n.4), or "calm, thoughtful and curious" (male n.5). This emotional state is not the result of having explored a digital space created by someone else (like in the hypertext mode) but the result of having constructed and shared a physical space.

So, what would then destabilise *Rider Spoke*?

Anything that would obstruct this process of engagement with a meaningful mediated world is of danger to *Rider Spoke*. If contributors do not take seriously the quality of their contribution, if technical issues make the uploading/downloading of comments too slow, if questions seem too personal, or not personal enough, if the bicycle has no brakes… *Rider Spoke* becomes a heterogeneous database of accounts which are insignificant to its users because they do not create relations anymore.

Like any other participatory narrative, *Rider Spoke* does not exist without its willing contributors. No external narrator, no game prize can hold the attention of its participants. *Rider Spoke* makes no promises and offers no rewards. Although some people call it a pervasive game, it lacks the basic logic of a game: winning. Here nobody wins, but everybody can build together or dance in a new space (those are the two metaphors that were proposed in chapter one to describe the type of interaction behind participatory and experiential interactive documentaries).

Finally, regardless of its success, *Rider Spoke* has a pre-determined life span. Depending on the cities it has travelled to, it has been organized as a one, or two, week event. Contrary to most participatory documentaries on the Web (*RiP: a Remix Manifesto, 6 Billion People, Mapping Main Street* etc…) which are designed to stay alive as long as people want to participate, *Rider Spoke* does not depend on its success. The end of *Rider Spoke* is announced in advance. The length of its life has nothing to do with its popularity. As with any performance it needs participants to be in the right place at the right time. Digital technology is not used here to make content constantly available, but actually to make it very exclusive and to make you feel that you are "one of the lucky participants". Its database of comments stays alive after its end, as a virtual container of memories that cannot be accessed by the public. At no moment does *Rider Spoke* promise to give the participant access to all

of its content. Its aim is to give meaning to personal physical space, not to create an eternal work of art. *Rider Spoke* is about situatedness, not about accessibility. It finishes the moment the user gives back the bicycle. It only makes sense during its enacted experience. No photos of you cycling, no film of your performance is mailed to you after the ride. The fact that it lasts two weeks is nearly irrelevant as it is never to be perceived as a whole but only as a relational situated experience. *Rider Spoke* speaks about a world that cannot be represented but only experienced and where every contribution is partial but determinant. It reminds us of our embodied human nature and of our connection to our environment: we are co-emergent entities.

Summary

This chapter concentrated on the experiential documentary, which has the specificity of positioning the user/participant in a physical space and to use such space as an integral part of the documentary. After having established that experiential documentaries can be *reactive* and/or *interactive* Blast Theory's *Rider Spoke* (2007) was chosen as the main case study of Living experiential documentaries.

The first part of the chapter questioned whether *Rider Spoke* can be seen as a dynamic system (in the sense that it can act on its environment) that has an organization (a logic of interaction and self-organisation that determines what it is), that has a structure (the materiality of its components but also their relations to technical protocols and design decisions), that can be more or less open to change (operationally closed/open) and that can have levels of self-making (levels of autopoiesis). To do this, the main *components* of *Rider Spoke*, and some of the *dimensions* that they form, were identified. By identifying "space" as one of the dominant components of *Rider Spoke,* we noted that the work creates a *hybrid space* where digital, physical, private and public realms are mixed together. Through the act of riding, practiced, embodied *spaces* become *places* (following de Certeau's and Dourish's distinction), and more precisely *shared places*. It was argued that *Rider Spoke* is not interested in Euclidian space, in that it does not want us to see location only as positioning, but rather as a space of proximity (Massumi, 2002) where context, potential and associations are key. I have called such space an *affected space* because it was assumed in this research that our notion of space and of

experience are linked. What was called *affected experience* is much larger than the mere felt experience of the senses: it assumes the co-existence, and the relationship between physical, energetic, mental and potential entities. This can only happen in a space that is not static and geometrical; it needs a space that includes time and that is seen as dynamic. During her ride through London a "new" city emerges. This city has not changed position, its buildings have not moved, but it is now qualitatively "larger" as it is now enriched by a specific situated knowledge of "cobbled streets", "other people's glances", "echoes" of other participants, personal memories and new thoughts.

Taking the logic of Living Documentary relationships, we focused on the component of the "author". It emerged that it would be inappropriate to see Blast Theory as the only author of the work. To the extent that Blast Theory owns the original intention of the work and has made it possible, then it is the city, the weather, the bicycle, the participants and the sunset that make it a compelling and rich experience. *Rider Spoke* is made by a growing numbers of authors - the work runs for one or two weeks during which testimonials keep accumulating. This means that there are never a fix number of authors, but only a co-emergent evolving group of authors. From an ontological point of view *Rider Spoke* represent a world that is predetermined in its rules, but where there is freedom of expression. Unlike hypertext mode, where the user has freedom of exploration and interpretation but no freedom of action, here the human being is portrayed as responsible of her own thoughts and actions. More importantly: *Rider Spoke* depicts a world where each voice has a political implication - as it influences the point of view of others. Only together, they create a whole that is multiple.

When looking at Rider Spoke's organisation it emerged that the work has a relatively high autopoietic behaviour because of its user generated logic. By populating its database with comments, *Rider Spoke* is built in such a way that it creates the conditions that will allow it to grow. Its autopoietic behaviour allows it to change and expand but, by doing so, it also changes the view that its participants have of the space around them. The more people listen to other points of view about the same space, the more they will see it differently. In this respect it is argued that *Rider Spoke* is a Living Documentary that affects itself and its environment.

We then moved into examining whether changes affect the identity of *Rider Spoke* and/or the identity of the systems that are related to it. We noted that both the

questions and the bicycle ride are crucial in provoking changes. While answering a question the participant takes a position, through each recording the user 'resingularises' (Guattari, 2006: 7) herself. But, by taking a position, and interpreting the city around her, the participant also influences the experience of the city that other users will maybe have. In a reflexive loop, the city and *Rider Spoke* change the user (she experiences the city in a new way) and she then changes other users' opinions (by recording a comment on *Rider Spoke*'s database). Through this recording she also changes *Rider Spoke* (whose database has been added to and whose interface has changed) and the city itself (that is effectively perceived differently by the users). *Rider Spoke* allows us to see the dynamic relation that is constantly linking us with our environment: there is no knowledge that "comes from" anywhere as we actually co-constitute ourselves, and co-emerge, with our environment (Gibson, 1979).

Finally it was questioned if, and when, *Rider Spoke* can come to an end and what stabilises, or destabilises, it. It emerged that *Rider Spoke* has different lives: its *global life* as a digital artefact, and its *temporary life* during the experience of the individual user. If any technical glitch can compromise *Rider Spoke*'s global life, any distraction that the city might offer (an accident, a friend crossing the street, a phone call while riding) can also jeopardise its temporary life span. When looking for what stabilises the work we noticed that participants find the experience satisfactory when it becomes meaningful to them. *Rider Spoke* empowers its contributors, and makes them take responsibility: they have to make a statement. Their participation is public and heard by others. Their power is visible and transformative. Their emotional state is not the result of choice (as in hypertext mode) but of embodied participation.

A particularity of *Rider Spoke* is that, although participative, its performative and locative nature limits how long it can live, in contrast to other forms of Living Documentaries that are Web based. Its life span is fixed to a couple of weeks by Blast Theory. The success of the work is therefore not measured by its longevity, but by the quantity and quality of its recordings. Those recordings will never be graspable as a whole by anybody, since the database is only accessible by its participants during their ride. The world that *Rider Spoke* portrays is never to be totally experienced by a single individual. Each person will see a part of it and will participate in making it a richer, or a poorer, place. Only Blast Theory, as a God like figure, could potentially listen to every single message left in the database. However,

again, these messages would have no meaning if they are not situated in the location that inspired them, and if not heard after having embodied the city through a bicycle ride.

Rider Spoke questions our embodied human condition: our journey seems to belong only to ourselves and yet it depends on so many other things that are commonly placed outside us. The whole notion of the so-called "in" and "out" are challenged by *Rider Spoke* as it constantly positions us as "in relation" through *affected experience* with our environment. As I am riding and I feel the shaky effect of a cobbled street on my body, can I still maintain that I am separated from the pavement of such street? Could it be that the relation cobbled street-wheel-suspension-bottom-body has temporarily became a transitional whole? And while this "I", that might be larger than my body, attempts to decide whether to stop or to turn into a smoother street, is it the green light, that has suddenly turned to red, the kid who is crossing the street without watching me, or my will… that actually has made me apply the brakes? In a world where every action is 'situated' (Suchman, 1987:50) understanding the "whys" seems pointless, as they are too many and most of them cannot be consciously grasped. Instead, since every action is linked to others, and has potential consequences, we are constantly made aware that we are responsible for our own contribution to what, together, we might want to call "our world".

Chapter 5 – The participatory documentary through the lenses of the Living Documentary

As seen in chapter one, the participative mode of interactive documentary expects a specific form of inter-action from the user: to influence in one way or another the *processes* of documentary production (Dovey and Rose, forthcoming). With the rise of social networks[1] in the last ten years, and the general acceptance of Web 2.0's collaborative logic[2], documentary producers have been tempted to engage their audiences into what was previously a walled garden: the production of the documentary. The way to transform what was previously called an audience, to what has been called, in the world of collaborative media, a group of 'pro-sumers'[3] (Tapscott and Williams, 2008:127) is to allow User Generated Content[4] (UGC) in the documentary itself. But what does this really mean? What type of User Generated Content can be used and how is this influencing the process, the final shape, and the organization of the interactive documentary?

Web 2.0's 'implicit architecture of participation' (O'Reilly, 2005:6) is not clear about what "participation" might mean in the realm of cultural production and, more specifically, in documentary production. A quick look through the participative documentaries that have emerged online in the last ten years shows that rather than there being a few, there are in fact an infinite number of possible degrees and manners of collaboration: the participative documentary acquires a different form depending on the type of collaboration demanded (user-testing ideas, crowdsourcing research material and content, commenting, editing existing footage, translating

[1] Media theorists Boyd and Ellison define social network sites as 'web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system' (2008:11).

[2] In his article *What is Web 2.0* Tim O'Reilly underlines that in Web 2.0 'there is an implicit "architecture of participation", a built-in ethic of cooperation, in which the service acts primarily as an intelligent broker, connecting the edges to each other and harnessing the power of the users themselves' (2005:6).

[3] In *Wikinomics, How Mass Collaboration Changes Everything*, Tapscott and Williams, explain how a new generation of consumers are emerging as a result of social media: the "pro-sumers". Those are not just consuming content as they also generate it. The pro-sumer 'treats the world as a place for creation, not for consumption' (2008:127).

[4] In *Here Comes Everybody* Shirky defines User Generated Content as 'a group phenomenon, and an amateur one'. When people talk about User Generated Content, he says, 'they are describing the ways that users create and share media with one another, with no professionals anywhere in sight' (2008:99).

subtitles etc…), who is invited to participate (the people being portrayed in the documentary or the audience/users), and the phase that is influenced by such participation (pre-production, production and/or post-production). The final documentary can be a linear documentary/performance - created through user collaboration but orchestrated by an author (*Overheated Symphony, RiP: a Remix Manifesto, Life in a Day, The Johnny Cash Project* etc…), an interactive Web documentary that leads to comments and debate (*Prison Valley, Miami/Havana* etc…), an interactive artefact that is closed to its audience but that actively involves the subjects that it portrays (*Out my Window, The Waiting Room, GDP: Measuring the human side of the Canadian economic crisis* etc…), a locative documentary that gathers User Generated Content (UGC) while moving in physical space (*Rider Spoke, The Emotion Map*) or an open database fed by user content (*6 Billion Others, Participate, One Day on Earth Interactive Gallery, Mapping Main Street* etc…). It would be wrong to speak about just one type of participative documentary as there are an infinite number of hybrids adding a participatory logic to an underlying hypertext, conversational or experimental mode of interaction[5]. Different levels of participation seem to lead to different degrees of openness of the final artefact, going from a finished, and therefore closed, linear documentary to an open Web documentary that keeps changing and expanding through time and user participation. Lately, crowdsourced content has allowed the creation of projects that are entirely populated by UGC (*The waiting Room, #18 days in Egypt, Life in a Day*) where the producer's role has been to redistribute and mould such content into a variety of forms - typically one full length documentary film, one interactive Web documentary, and possibly a book, an iPad application or a game. Documentaries that are not stand-alone artefacts, but rather a piece of a puzzle of a vaster multi-platform story-world, have been called *trans-media documentaries*[6], not to be confused with cross-platform documentaries. Because trans-media documentaries

[5] See chapter one for the definitions of *modes of interaction*.

[6] Trans-media documentaries are part of the larger form of trans-media narratives, which include fictional narratives. In 2003 MIT media studies Professor Henry Jenkins used the term "Transmedia Storytelling" in his *Technology Review's* article. Since then the term has clearly differentiated itself from cross-platform narratives. In a cross-platform narrative a same story can be present on different formats (and example would be Michael Morpurgo's book *The War Horse* that has inspired a play and that will become a movie) while in a trans-media story each platform only contains parts of the story, and the user/participant needs to move from one media to the other to have the full picture (examples would be Lance Weiler's *Pandemic 1.0*, Trim Grim's *Conspiracy for Good*, and Martin Ericsson's *The Truth About Marika*).

have been presented as a new breed of documentaries, it is important to state that, within the context of this research, they do not constitute a new mode of interaction (to be added to the other four described in chapter one) but rather a marketing strategy. The fact that on the 24th of July 2010 UGC was uploaded from all over the world to feed *Life in a Day* YouTube's channel[7], and that this content was then used to produce a feature length film by director Kevin MacDonald, makes *Life in a Day Interactive Gallery*[8] (the interactive online version of the film) a "participative interactive documentary" that uses crowdsourcing strategies of participation, but it does not create a new type of interaction. The novelty is in using multiple platforms to reach different audiences. What effectively is a marketing strategy to prolong the life-cycle of a film is not to be confused with a new mode of interaction[9].

Participation as a high level of interaction

So, what could "participation" mean in the context of an interactive documentary? Does not the fact that it is an interactive artefact already imply some form of participation from its viewer/user/player/participant?

First of all, *interaction* and *participation* are not interchangeable concepts. In this research, interactivity is seen as the ensemble of relations that the assemblage computer-man-documentary creates, and is created by. This is a very holistic vision of interactivity as a relational force, but a force that is not neutral. As philosopher Brian Massumi writes in *Interact or Die!* 'It is not enough to champion interactivity. You have to have ways of evaluating what modes of experience it produces, what forms of life those modes of experience might develop into, and what regimes of power might arise from those developments' (Massumi, 2007:78). It has been argued in chapter one that *modes of interaction* make all the difference between interactive documentaries because they produce different *modes of experience* and different regimes of power. But within each mode (hypertext, conversational, experiential and participative) *levels* of inter-action are possible and this research

[7] See *Life in Day*'s dedicated YouTube channel at http://www.youtube.com/user/lifeinaday.
[8] See *Life in Day*'s *Interactive Gallery* at http://www.youtube.com/lifeinaday?x=explore.
[9] At the trans-media conference Power to the Pixel 2011, *Avatar*'s trans-media producer Jeff Gomez (CEO of New York-based Starlight Runner Entertainment) explained how American majors film companies, including Disney, are now using trans-media strategies to have a higher return on their investments. Effectively using more than one platform gives a longer life to a film, and allows multiple access points into a story from a variety of different audiences.

defines them in relation to the effects that they have on the artefact itself. The act of interpretation of the viewer, which is a form of interaction since it creates relations between the viewer and the content, is not changing the content nor the form of the artefact. The act of clicking and choosing in a hypertext does not change the documentary's content although it affects the user's experience. Hypertext interaction (see *The LoveStoryProject*, chapter three) is therefore seen as affording a relatively low level of interaction. Experiential interaction, where for example the user is free to move in a city area (see *Heygate Lives*, chapter four) creates a new interface at every moment that also influences the people that share the same moment in affected and time space. Here a higher level of interaction gives the user real power over its affective experience. Finally, when the interactor is also empowered to participate through adding content to a database by recording her voice (see *Rider Spoke*, chapter four) her inter-action goes one step further than in the other examples, because it changes the database - transforming the interactive documentary itself[10].

If all interactive documentaries are interactive, not all are participative. For me participation is one specific mode of interaction, within many others. It is a mode of user-action that comes from participatory culture (Jenkins, 2006:3) and that is much more specific than what is implied in the colloquial use of the term as "the action of taking part in something"[11]. The fact of taking part is assumed in interactive documentaries, but it is the "how" and "when" that makes all the difference. In *Convergence*, media critic Henry Jenkins defines participatory culture as 'a culture in which fans and other consumers are invited to actively participate in the creation and circulation of new content' (2006:331). "Creation and circulation" are different from choosing (hypertext mode) or moving (experiential mode). They engender other 'modes of experience' and other 'regimes of power' (Massumi, 2007:78). In this context participation in an interactive documentary is not just equivalent to interacting with it; it means interacting in a specific way: by adding content or by circulating it. The question then becomes: what does creation and circulation of content mean in the context of an interactive documentary? In order to answer such question it is important to go back to the roots of the notion of participation in digital

[10] Potentially participation could also mean changing the structure of the database, or the modes of interaction, but as we will see in this chapter this is an area still to be explored.
[11] Definition from the Oxford Dictionary (2010 Edition).

culture. It is by tracking back the influences of *participatory culture* into the praxis of video and documentary making, that the strategies of collaboration in interactive documentary will become clearer.

Participatory culture and interactive documentary

The role of the filmmaker as a subjective observer, and the opening of video production to amateurs, does not have its roots in YouTube or Web 2.0, but rather is the result of a cultural, scientific and technological context that has repeatedly questioned the authority of the author/filmmaker/scientist throughout the whole of the 20th and 21st century. The 'camcorder cultures' of the 1990s (Dovey, 2000), the culture of 'vernacular video'[12] (Burgess & Green, 2009:25) and the avant-garde dreams for an open video language (Sorenssen, 2008) are seen by media theorists Dovey and Rose as the main influences of a situated documentary aesthetic that seems to say 'I was here', 'I experienced this', 'I saw that' (Dovey and Rose, forthcoming) rather than 'this is how it is'. Collaborative sites such as YouTube, Flickr and Wikipedia, are flourishing because they channel a cultural need that was ready to be expressed, and not because they have engendered such a need. Media theorist Jenkins, in *What Happened Before YouTube*, reminds us that it is 'the emergence of participatory cultures of all kind over the past several decades' that have 'paved the way for the early embrace, quick adoption, and diverse use of such platforms [as YouTube]' (2009:109), and not vice versa.

This being said, as in any dynamic relation, the communication logics afforded by social media have increased our abilities to share and cooperate with one other and, by making it so simple for the individual to contribute to group effort, they have created the condition for a 'participatory culture' (Jenkins, 2006:3). *Participatory culture*, states Jenkins, 'contrasts with older notions of passive media spectatorship. Rather than talking about media producers and consumers as occupying separate roles, we might now see them as participants who interact with each other according to a new set of rules that none of us fully understand' (ibidem).

[12] In their book *YouTube*, Burgess and Green define vernacular creativity as 'the wide range of everyday creative practices (from scrapbooking to family photography to the storytelling that forms part of casual chat) practiced outside the cultural value systems of either high culture or commercial creative practice' (Burgess & Green, 2009:25).

This section sets out to unpick the types of participation that, as Jenkins notices, 'none of us fully understand' yet (Jenkins, 2006:3), and situate them in the context of interactive documentary production. Behind this approach there is the assumption that participation in creating software (*Linux*) is not the same as participation in creating an online encyclopaedia (*Wikipedia*) or a participative documentary (*Mapping Main Street*). If sometimes the strategies of collaboration (open source, crowdsourcing, peer-reviewing, User Generated Content etc…) are similar, the results are very different because they can influence different moments of the creation of the digital artefact and they feed into media and forms, which all have different affordances and constraints. *Linux, Wikipedia* and *Mapping Main Street* are all fed by UGC, but the way such content is used is different because crowd participation in creating an encyclopaedia entry is not the same as peer-participation in software development, and helping de-bugging an operating system is different from helping editing a movie (as in *Rip: a Remix Manifesto*). Although *Linux, Wikipedia* and *Mapping Main Street* are all digital artefacts they have different purposes, aesthetics and success standards: software needs to run without crashing, an encyclopaedia needs to be trusted and a film needs to have a gripping narrative[13]; they are comparable only to a certain extent.

Currently, terms such as crowdsourcing, open sourcing and User Generated Content are not clearly differentiated when applied to interactive documentaries. Trying to make some sense of those collaborative practices while analysing the participatory documentaries *Life in a Day* and *Man with a Movie Camera: a Global Remake*, collaborative documentary specialists Mandy Rose writes in her blog[14]: 'How do we delineate crowdsourcing, collaboration and co-creativity in these works? How do we understand a shared process of meaning making? Is participation in these projects a good in itself? How do the process and the finished product interrelate? (…) These are complex questions, without ready answers' (Rose, 2011, September 20th).

Perhaps the confusion between crowdsourcing, collaboration and co-creativity comes from the fact that they are often used as generic synonymous for participation.

[13] These are obviously broad simplifications. Software can be poetic, an encyclopedia can be experimental and a film can be non-narrative lead. But overall, the vast majority of projects within those categories tend to fit within certain viewer/user expectations.

[14] See http://collabdocs.wordpress.com/, accessed 8.10.11.

While these terms share a bottom-up approach[15] to cultural creation, they differ on how such creation is reached because they have different origins. As we will see in the next section, "peer-sourcing" and "open sourcing" come from the world of software hackers, while "User Generated Content" comes from the world of social networks, bloggers and Wikipedia feeders. None of those comes from the realm of video production. In order to understand how these terms can be applied to interactive documentary, we need to understand what they meant in their original context and how they have been applied to the affordances and constraints of video production and documentary language.

From open source code to open source documentary

The term "open source" was coined in 1998 when technology publisher Tim O'Reilly organized the Freeware Summit to find a new name for what had been called "free software"[16]. Open source is therefore the result of a strategic rebranding that promotes an approach to software development that dates back to the late 1960s[17]. As elegantly summarized by Tapscott and Williams in *Wikinomics* open source code basically follows this motto: 'nobody owns it, everybody uses it, and anybody can improve it' (2008:86).

In *Rebel Code*, Glyn Moody explains how important it was for certain hackers to officialise open source and therefore to 'have clear licences and modes of use' (2001:86)[18]. Eric Raymond proposed to refer to the Bruce Perens' Debian Free

[15] For many cultural theorists (Hoggart, 1957; Williams, 1958, Fiske, 1989, 1992, Hall, 1981) bottom-up participation matter insofar 'as they can be understood as a part of a political project of emancipation and democracy, tied to the politics of class, race, and gender' (Jenkins, 2009:11).

[16] The critique that was made to the term *free software* was that "free" means both "freedom of information" and "no cost". The name *Open source* was proposed to put the emphasis on the free ability to look at the source code of a software keeping the free cost of the resulting application a preferred option, but not a necessity. As a result both open source and free software still exist as separate movement. They share the same working praxis but not the same philosophical and political goals.

[17] This open source culture has its roots back in the late 1960's when ARPAnet, the Internet predecessor, allowed programmers to exchange source code to solve problems. Most of today's Internet is the result of such voluntary collaboration. This logic of peer production became recognized as a possible mainstream form of software development when in the second part of the 1990's open source operating system Linux started to be widely recognized, Netscape released its source code, and Eric Raymond published his paper *The Cathedral and the Bazaar* (where he clearly explained the ethics and culture of the open source movement).

[18] Until then most freeware programs had chosen the GNU General Public Licence (GPL) because as Linux's creator Linus Torvalds said "the only thing the copyright forbids is that other people start making money off it, and don't make source available (to others)" (as quoted in *Rebel Code*, p.79).

Software Guidelines. Those guidelines[19] made it clear that "open source doesn't just mean access to the source code". The distribution conditions of an open source program must comply with nine criteria which are there to guarantee the free distribution of the derived versions[20]. Anybody can modify a source code, adapt it to a specific market need, and still copy and distribute it freely – even for commercial gain. This is meant to give an incentive to programmers who wish to modify a program: they can freely copy their version and distribute it without having to pay copyright to the original software owners, but their version needs to be available to all. Hackers were convinced that the most effective way to achieve reliability in software was to open up its source code for active peer-reviewing: 'secrecy is the enemy of quality' (Raynold, 2004:3).

The open source definition deals with the criteria of distribution for such software, not with the way in which the program has been created. The culture of free hacker collaboration that has emerged through the creation of open source and free software is the result of a methodology of work that programmers such as Torvalds[21], Stallman[22] or Murdock[23] have created: using the Internet to post messages to the hacker community, one programmer would describe his project and people would volunteer to help and participate. More than crowdsourcing, this is peer-sourcing within a highly specialized community: that of hackers.

This collaborative effort has proven to work very well in a relatively small, and highly skilled community, such as the hacker's (where there is a common passion, a sense of belonging and where respect and reputation are important[24]). But could this model of peer-production work in areas other than software and in communities other than programmers?

When filmmakers started drawing the parallel between source code for software and video rushes for documentaries, they started adjusting modes of production coming from different realms. Uploading rushes on the Internet was interpreted as making

[19] For the full definition of Open source see http://www.opensource.org/docs/osd, while for Bruce Perens' analysis of the definition see http://oreilly.com/catalog/opensources/book/perens.html, accessed 6.6.10.

[20] This definition was accepted by the Open Source Initiative -an organization that was founded in February 1998, by computer programmers Bruce Perens and Eric S. Raymond.

[21] Originator and leader of the free Linux operating system.

[22] Originator of the free GNU operating system.

[23] Originator of the free Debian operating system.

[24] See *Homesteading the Noosphere* by Eric Raymond for a full description of the Hacker's ideology (page 65 of *The Cathedral and the Bazaar*).

them available to other filmmakers so that they could use them in other productions, or to re-edit the original film.

Dancing to Architecture, by Leroy Black and Kristefan Minski, is to my knowledge the first documentary directly inspired by the open source ideology. Shot in 2002, interestingly enough just one year after the Creative Commons[25] was founded, *Dancing to Architecture* is a film about the Australian This Is Not Art festivals (TINA) - held in Newcastle, every year in October. During the festival people used any possible video format (Mini DV, Digital 8, Video 8, Hi8, DVC Pro, and Webcams) and covered the events of the festival. The 140 hours of interviews, presentations and workshops, events, exhibitions, performances and time-lapse recordings where then edited into an art film[26], but they were also uploaded into an Internet archive[27] where anybody could use the footage freely for their own productions – or create a re-edit of the film. With a budget of AU$1000, and before the establishment of Web 2.0, the first open source documentary had been made.

But what is "open source" about it? The documentary itself was made like any other low budget documentary: a lot of participation from friends and volunteers to create a final piece which was edited, like any other linear film. The authors of the movie retained their role of shapers of the film. What was perceived as new, back in 2002, was that the rushes were not considered property of the people who shot them. The authors were not claiming the sole use of their images: the interviews and all the video rolls were made available for others to use in re-mixes or in other productions[28].

[25] The Creative Commons is a non-profit organization devoted to expanding the range of creative works available for others to build upon legally and to share. It has released six copyright-licenses known as Creative Commons licenses. Of those six the Share Alike one (CC-BY-SA) is the only one that gives free rights to share and remix part or all the content. The only two conditions it poses are: one needs to attribute the work in the manner specified by the author or licensor and one needs to distribute the resulting work only under the same, similar or a compatible license. For the official definition of the Creative Commons see http://creativecommons.org/licenses/by-sa/3.0/, accessed 21.6.2011.

[26] The film is available at http://www.minskimedia.com/projects/dta.html, accessed 9.10.10.

[27] The log of the tapes can be found at http://www.minskimedia.com/projects/dta-archive.html (see Fig.29), and the videos themselves are stored into the DTA open source archive at http://www.archive.org/search.php?query=TINA%202002 , accessed 20.10.10.

[28] The film is released on the Internet under the Creative Commons attribution 2.5 Australia, which gives free rights to copy, adapt, distribute and transmit the work (see http://creativecommons.org/licenses/by/2.5/au/).

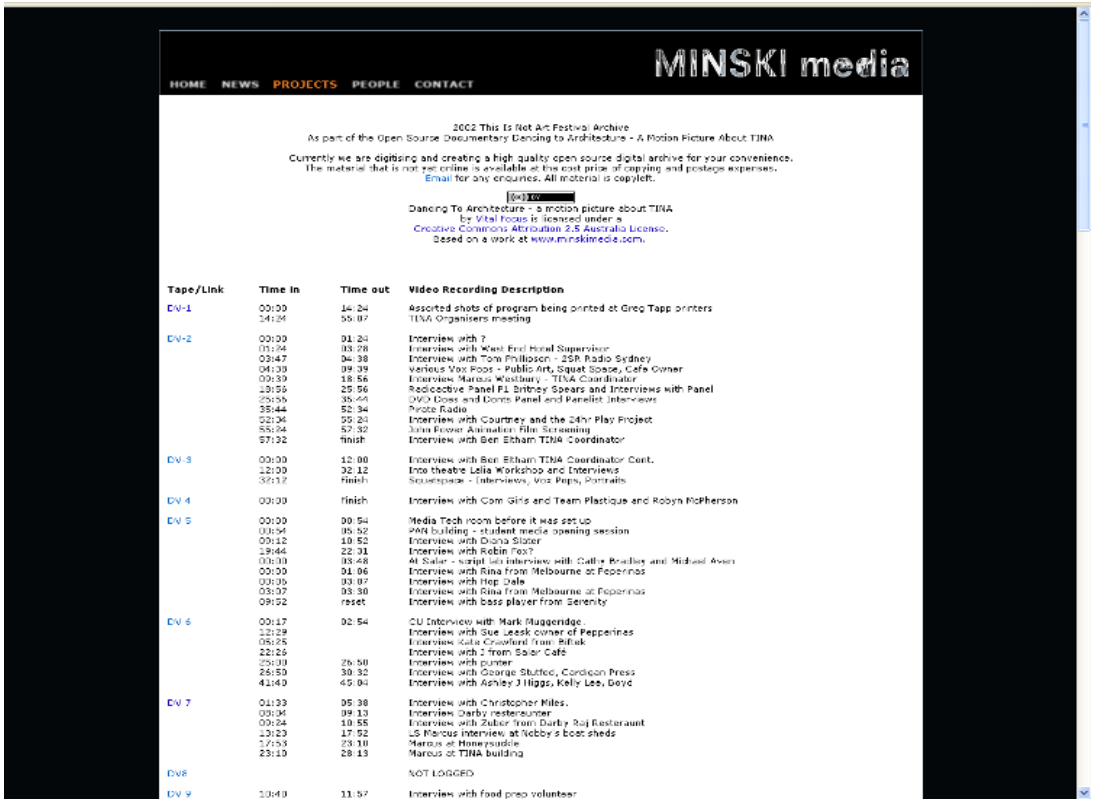

Fig. 29 - *Dancing to Architecture* online archive (http://www.minskimedia.com/projects/dta-archive.html)

It is important to note that the parallel made between source code for software and raw footage for films only works to a certain point. Source code in software is not just the equivalent of un-edited rushes. A program's code has an order, a grammar, that makes it "run", and therefore "work". Code does have an aesthetic, in that a piece of one line of code can be more elegant than another in achieving the same goal, but ultimately the goal is to be read by the machine and to achieve a pre-set task. A documentary also has shots positioned in a certain order, a grammar, that makes it "work", but it does not "run", it expresses a point of view and it needs to "work" visually, and aurally, rather than practically. Edits are not there to say to the projector "go to the next frame", they are not lines of code to be executed, as they create moods, emotions and ultimately meaning for the viewer. Because shots are to be seen, their juxtaposition becomes the voice of the author, as the choice of such shots, in such order creates the message and mood of the documentary. But code is to be executed by the machine and not by end user. The end user does not need to have access to the code of software to know if it works, while an audience needs the shots of a movie to make sense of the voice of the author. This makes all the difference: while one might be motivated to make something run better, it is quite

difficult to feel the urge to alter someone else's point of view by tweaking, or adding, to the discourse. In *Dancing to Architecture* people could, in theory, remix the movie, add their own shots, and create a "better" version … but in reality why would they do so? They might want to use the free pool of material made available on the Web in their own projects, but probably not spend their own time re-editing someone else's work.

Dancing to Architecture illustrates well the passage from open source code to open source narrative content. Although the film material is made free, the participation of the viewer does not influence or transform the "original" movie. Participation here follows an open source logic in the sense that new versions can be made, and material can be used, but the original film stays intact. A few more "free to use rushes" [29] documentaries were released, but fairly rapidly the collaborative options of Web 2.0 inspired different logics of participation: participation as a way to influence the *processes* of documentary production (Dovey and Rose, forthcoming) rather than re-using rushes.

Around 2004, filmmaker Brett Gaylor began working on a participatory project where people could not only share resources but collaborate on the film production itself. Coming from a new media background, Gaylor was one of Canada's first videobloggers. To go beyond the idea of free sharing of rushes, he created the Open Source Cinema[30] website which encouraged people to participate in making his feature documentary: *RiP: A Remix Manifesto*. In his website, Gaylor describes *RiP* as 'an open source documentary about copyright and remix culture'[31] – with particular interest in the charismatic remix DJ Girl Talk.

[29] Two years after *Dancing to Architecture* was made, Stephan Kluge and two German friends of his decided to do a road movie about their improvised trip around America: *Route 66. Route 66* is downloadable from the Internet and people can use its shots and propose new soundtracks.
[30] See www.opensourcecinema.org, retrieved 21.09.10.
[31] From http://www.opensourcecinema.org/project/rip2.0, retrieved 21.09.10.

Fig. 30 - *RiP: A Remix Manifesto* home screen (http://www.opensourcecinema.org/project/rip2.0)

It took six years for the film to take a finished shape and Gaylor claims that it is the result of hundreds of people who have contributed to his website. But how did this collaboration really work? Gaylor is the first one to admit that the collaboration logic changed throughout the years[32]; it evolved through trial and error. At the very beginning of the project, Gaylor was uploading the rushes of the interviews he was doing, and was just asking people to remix them. This did not work because no one knew about his project, and no one seemed to be interested in spending time remixing it. Crowdsourcing the masses did not seem to work. Gaylor then tried to tap directly into the re-mixer community, searching for the most talented ones via YouTube. Following Jeffe Howe's categorisation of crowdsourcing[33], Gaylor was

[32] Private interview held on the 10.11.09.

[33] The term *crowdsourcing* was first coined by journalist Jeff Howe in *The Rise of Crowdsourcing*, Wired Magazine, June 2006. In this article Howe notices that companies are starting to use the Web to tap into a 'new pool of cheap labour: everyday people using their spare cycles to create content, solve problems and even do corporate R&D' (Howe, 2006:1). Howe also highlights four groups of people that are being crowdsourced: the professionals, the packagers, the tinkerers and the masses. Obviously the target group is chosen depending on the needs and enquiries of the crowdsourcer. In Gaylor's case a group of professional, in the sense of experts, re-mixers was chosen. Although re-

now crowdsourcing 'the professionals' (Howe, 2006:1) which is to say that he was peer-sourcing within a selected crowd of enthusiastic re-mixers. In a certain way he did what hackers do: identify the experts and ask them to participate to a project. He identified some talents and approached them via what he calls a "contest logic": challenging them to re-edit something better than him. This proved to be successful: a small community was now engaged in helping in a documentary about remix culture. They would communicate by e-mail and have a close relationship.

Gaylor says that what he learned is that one needs to create different levels of participation, because the hardcore collaborators are very few. What seemed to work particularly well was to edit a segment, post it to the community, and then ask people to "fill the gaps" or to do a specific task. Gaylor here was clearly following Torvalds' benevolent dictator's strategy of collaboration, where all the decisions were made by him, but expert peers could collaborate on precise tasks[34]. Gaylor's attempt to introduce participative logic in his documentary is limited by the final form of the documentary itself: a linear film, which needs to respect the rules of narrative coherence. The viewers can help in the process, but they cannot own the form.

When asked why he stayed so much in control of *RiP* Gaylor answered "because it is my movie, I take responsibility for it"[35]. Although he believes in the power of collaboration he does not think that leading by consensus works. For him collaboration was a way to "keep the project honest, and to improve it". People did make his film different from what he would have made alone and they also provided a sort of guarantee that he would not deviate too much from their remix ethos and beliefs. But Gaylor is very clear that he had to keep editorial control: for him "open sourcing software is not the same as open sourcing a cultural project"[36]. The assumption behind Gaylor's answer is that a movie can only be collaborative to a certain point, as the author always have to have the last word and express his/er point

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mixing is not recognised as a paid profession, its most active members are recognized as experts in the field. Gaylor did not offer a financial retribution to the people who answered his calls to collaboration, but their name was credited in the final movie. Recognition, more than profit, was used as a motivator of participation.

[34] In the most famous example of open source software, the operating system Linux, project leader Linus Torvalds was steering the boat: he had the power to take on board, or disregard, other people's packages of code, and of proposing new development routes, but the whole community was active in proposing solutions, debugging software and pointing out issues. This model of collaboration has later been called 'the benevolent dictator' by Eric Raymond in *The Cathedral and the Bazaar* (1998:110).

[35] Recorded interview held on 10.11.09.

[36] Recorded interview held on 10.11.09.

of view. Going further in this analysis one would have to deduce that software can be the result of a vision but that it does not express a personal point of view.
A documentary made using crowdsourcing's logic of participation, following Wikipedia's example that will be explored next, would have to accept crowd-reviewing, rather than single authorial editing. Such a documentary would probably lose its narrative coherence – normally linked to its author's voice - and would therefore assume a rather fragmented aesthetic (where coherence is not given by authorial narrative but by the journey of the pro-sumers). As we will see in the next section, when a documentary fully embraces a mass crowdsourcing logic, the role of the author has to move from "narrator of a story" to "facilitator of other people's stories".

From crowdsourcing Wikipedia entries to crowdsourcing video

If the Internet facilitated peer-collaboration in the hacker and academic community, Web 2.0 pushed participation one step further, opening all cultural content domains (music, encyclopaedia, design, news, video etc…) to mass collaboration, leading to the emergence of *crowdsourcing*. Although the term comes from open source principles, it evolved beyond software production to describe new models of collaboration and organization. We see this clearly in media writer Jeff Howe's blog. The man who originally coined the term crowdsourcing in 2006, flags in his website not one, but two, definitions of crowdsourcing. The first refers to the idea of outsourcing work to crowds; the second to the idea of free distribution of content/source code:

1. Crowdsourcing is the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call.
2. The application of Open Source principles to fields outside of software[37].

One of the most influential example of crowdsourcing is Wikipedia. From its launch in the year 2000 it has challenged both the view of the expert as a quality guarantor

[37] See http://crowdsourcing.typepad.com/, retrieved 9.11.11.

of knowledge and the logic of corporate hierarchies as a preferred model to guarantee management efficiency, cost reduction and product quality. As analysed by media researcher Mayo Fuster Morell, in its first ten years of life, Wikipedia has actually evolved and changed several times playing with different models of community and infrastructure governance[38]. Nevertheless, overall, it has proven that certain levels of participation in both content and decision making[39] are possible even in mature organizations. German sociologist Christian Stegbaur calls the original concepts behind Wikipedia an 'emancipation ideology'" (Currie and Stegbaur, 2011:342) where the two holding concepts are that everybody can participate, and that the global knowledge resulting from such fragmented participation can be as valid, if not more, as the one produced by the recognised experts of the field.

Wikipedia's entries are written collaboratively by an international group of volunteers. Anyone with Internet access can write and make changes to Wikipedia's articles. For Wiki advocates Bo Leuf and Ward Cunningham, 'Wiki is a lot about a *collaboration space*' (2001:16, italics in original) that is '*inherently democratic*' (ibidem) – in the sense that every user has the same capabilities as any other user. Wikipedia's source code, its content and its logic of governance have been inspired by open source culture, and yet they had to adapt to a new culturally specific environment. Wikipedia's source code is open source. Because its content – the text entries – accord with the three principles that Tapscott and Williams use to define open source software, 'nobody owns it, everybody uses it, and anybody can improve it' (2008:38), it has been called open source content. Although collaboration is present in the text entries, I will argue that it is of a different kind to software collaboration. For example, the governance in Wikipedia is specific to the needs of a crowdsourced encyclopaedia. Wikipedia's governance has evolved with time and, although it has been inspired by the open source ideology, it is now a model of its own.

[38] Here governance is defined as 'the arrangements of power relations within a group' (O'Neil, 2011:309).

[39] Wikipedia has in turn been seen as an example of bazaar governance (Eric Raymond, 1998), as democratic (Don Descy, 2006), as meritocratic (Axel Bruns, 2008) as anarchic (Joseph Reagle, 2005) as self-generated policing (Bankler and Nissenbaum, 2006) or as a hybrid of different governance systems (Mayo Fuster Morell, 2011). This research is not trying to assess which system is most accurate to describe Wikipedia. What interests us is the crisis on the hierarchical model that Wikipedia has engendered, and the opening to new models of self-governance which are still to be experimented.

It is important to notice that the same misleading approximation between "open source software" and "open source text" has later happened again when matching "open source text" and "open source video". It is only by noticing those incremental approximations in the use of the open source term in participatory culture that one can understand its fluctuating meaning in participatory interactive documentaries.

When we speak about content production, Wikipedia, YouTube, Delicious, Flickr are all websites that give a platform for crowd publishing. The participant-authors, or pro-sumers, can be highly skilled but they do not have to be professionals[40]. Indeed, the collaboration may be between people from very different communities and ideologies. The motivation for collaboration here is not the relationship with a benevolent dictator, as in the case of *Linux*, but the wish to make a contribution to collective knowledge. The crowdsourcing collaborative logic is many-to-many, rather than many-to-one[41].

When crowdsourcing content implies relating to an idea, through a given interface, it means that the content that is added by the participant feeds into a database but does not change the rules of its interface. When one enters content in Wikipedia one makes its content larger, or more accurate, but one does not change the organization of the website[42]. Wikipedia's structure and interface is unchanged, it is the single entry that might be different. Transported into the online video world this means that crowdsourcing video creates an 'evolving documentary' (Davenport, 1995:6) but not a co-authored one. If in participative work authors are facilitators and not content producers, then co-authoring means having an influence on the idea and logic of the interactive documentary. To my knowledge, so far, this has never been attempted in full[43]. All the so-called participatory documentaries (*The Johnny Cash Project*, *Mapping Main Street, 6 Billion Others, Man with a Movie Camera: Global*

[40] Actually, as Jeff Howe noticed (2006:1), the skilled photographer amateurs of iStockphoto, and later Flickr.com, challenge the professional fees of so called professional photographers by simply offering for free, or nearly free, a service and expertise that used to be rare, and therefore costly.

[41] One of the changes that Web 2.0 has made possible, according to media specialist Clay Shirky, is that 'rather than limiting our communications to one-to-one and one-to-many tools, which have always been a bad fit to social life, we now have many-to-many tools that support and accelerate cooperation and action' (2008:158).

[42] A few active members of the Wikipedia collective can actually participate in some decisions taken by the governance body, the Wikimedia Foundation. This represents a minimal fraction of the people that use and edit Wikipedia every day, and the decision they can take part in are more of internal editorial organization than of strategic nature.

[43] *Global Lives*, analyzed later as main case study of this chapter is the project that comes closer to a co-authoring logic where the benevolent dictator's role is kept to a minimum, and where the form of the documentary is opened to future evolutions.

Remake, *Life in a Day*, *One Day on Earth* etc…) ask users to participate in a framework that they cannot challenge. Their participation is restricted to adding photo, audio, text or video content but does not extend to changing the interactive framework. Changing the interactive framework would mean allowing participants to intervene at the concept level and/or to keep changing the platform/interface itself while the project is alive. If we take *Life in a Day* as an example, this could involve challenging the concept of a single day of shooting (why not one week? why not one minute? why not audio only?) or the idea that movies should be professionally edited. Allowing collaborators to change the interactive framework could also involve letting them participate in the design of the final interface (why not use a different platform to YouTube? Why not co-design an independent platform for the project?). As it is conceived at the moment, *Life in a Day* does not propose concept or development participation. It seems to say: "this is our concept; you are free to adhere to it but not to modify it".

What digital technology has made easy is the creation and sharing of content, but not the creation of the platform to share such content[44]. The creation of a social platform from scratch requires programming skills that are not open to all. When we speak about participatory documentary, we should specify that there are different possible moments of participation and that those are not accessible by the same players. Effectively, the production life of interactive documentaries appears to be, in most cases, split in four: author's pre-production (research and ideas), author's production (technical realisation of the platform itself, which involves coding, and sometimes production of some content), launch of the digital platform (sometimes empty of content) and user's content production. This differs from the production cycle of a linear documentary, typically devised into three phases: pre-production (research), production (shooting and editing) and post-production (launch and distribution). In an interactive documentary there is a distinction between the production of the interactive artefact (interface, content management system, wireframe etc…) and the production of the content that is going to populate such interactive form. From this we see that precision is important when we refer to User Generated Content. The

[44] If this is true in the online documentary field it might be less true in other cultural fields where coding skills are high. For example, in her recent book *Art Platforms and Cultural Production on the Internet* (2012), Olga Goriunova gives several examples of online art platforms that deliberately want to open up their interface and structure to their collaborators. Of particular interest is software art platform *Runme.org* which invites all contributors to suggest names for new categories when they upload their art piece on the runme.org website.

effect of UGC on the digital artefact depends on the *stage* when the user collaborates and on the *nature of content* – whether it be video, audio, text or code.

Splitting the control of who makes the framework and who makes the content has political repercussions, as it divides roles, areas of influences and de facto balances of power. In *Participation as a Fragment of Functionalism*, Superflex artist Andreas Spiegl describes a similar mechanism in the art world and calls it 'politics of representation' (Spiegl, 2000). It can be easily arguable that splitting the control of the interactive framework and interface of an interactive documentary from the authorship of its video or audio content is also a political act. Such a split allows the interactive author to keep hold of the original idea, the message, and to leave users the role of validating such idea. When, on *6 Billion Others*' website, people add their own answers to the forty pre-set questions about life posed by author photographer Yann Arthus-Bertrand, they are de facto validating his vision of humanity by the simple act of participation. Their collaboration is a sort of signature by which they approve both the project, and its meaning, by giving their time and their voice.

I will argue that when we speak of participation in an interactive documentary we need to step away from equating participation with UGC. Firstly, as Adams has rightly noticed, a contribution can be much more than mere production of content. This simplistic understanding comes from the fact that we tend to associate UGC with the blockbusters of the crowdsourcing genre: Wikipedia, Flickr, YouTube and other participative websites where participation is effectively content based (offering extra text, photos or videos). But as Jeff Howe and Yochai Benkler remind us, crowdsourcing affords a wider view of collaboration: scientific solutions, creative ideas, local services and communal gatherings can all be the result of collective activities. If the result of the collaboration can be more than content, there should be no reason why it could not affect the form of the interactive artefact. Content, ideas, technology and form can, in theory, all be crowdsourced. Furthermore the collaborator does not have to be the "user" (intended as the audience, the final consumer of an interactive artefact) as it could also be the documentary subject (the one that the documentary is portraying). The complex granularity of "who does what and where" in a participative documentary is what makes all the difference between content-collaboration and co-authoring. When a large number of participants add content to a pre-determined database, they participate in an evolving documentary that behaves as an autopoietic living entity (it grows, it changes in aspect and shape,

it reacts to its environment but its organization stays closed). Those participants are *crowd-producers*, but not *co-authors*. They only collaborate in the database production. If, however, they could shape the interactive form of the documentary, then they could become co-authors – the author no longer being she who shoots and edits video content, but rather she who enables participation and who 'stages a conversation' (Dovey and Rose, forthcoming) through an interactive interface. The following examples should clarify this distinction.

In 2010, by uploading a call to action in the form of a YouTube video[45] Oscar winning filmmakers Ridley Scott and Kevin Macdonald launched a concept: crowdsourcing both a linear and an interactive documentary via YouTube. Joining forces with YouTube and the Sundance Institute, they launched an 'historic global experiment to create a user-generated feature shot in a single day (Rose, 2010:1). Through a multi-versioned promo available in 20 languages they engaged YouTubers around the world asking them to record a glimpse of their life on a specific date: the 24th of July 2010. Macdonald would then cut selected contributions into a feature documentary, *Life in a Day*, which would premiere at the Sundance Festival, and on YouTube, in January 2011. The aim was to create a portrait of 24 hours on earth. The promise to participants was that those featured would receive a credit and twenty of them would fly to the USA and join Macdonald at the premiere of the film. The linear film would only be one of the forms[46] that the project would take. YouTube would also host *Life in a Day Interactive Gallery* – a website where one could access the videos via several interfaces: a 3D globe, a matrix, geo-tagged location, time of day, mood, style, etc.

[45] See http://www.youtube.com/user/lifeinaday?gl=GB, accessed 10.10.11.

[46] Out of the 80,000 contribution that were sent, worth 4500 hours of video footage, only around 1000 became part of the final linear movie but all the material was presented at a touchscreen gallery exhibition and most of it is accessible through the interactive interface available at http://www.youtube.com/user/lifeinaday?gl=GB, menu "explore". For the gallery exhibition see http://www.youtube.com/watch?v=g4y6cppFxgo, accessed 10.10.11.

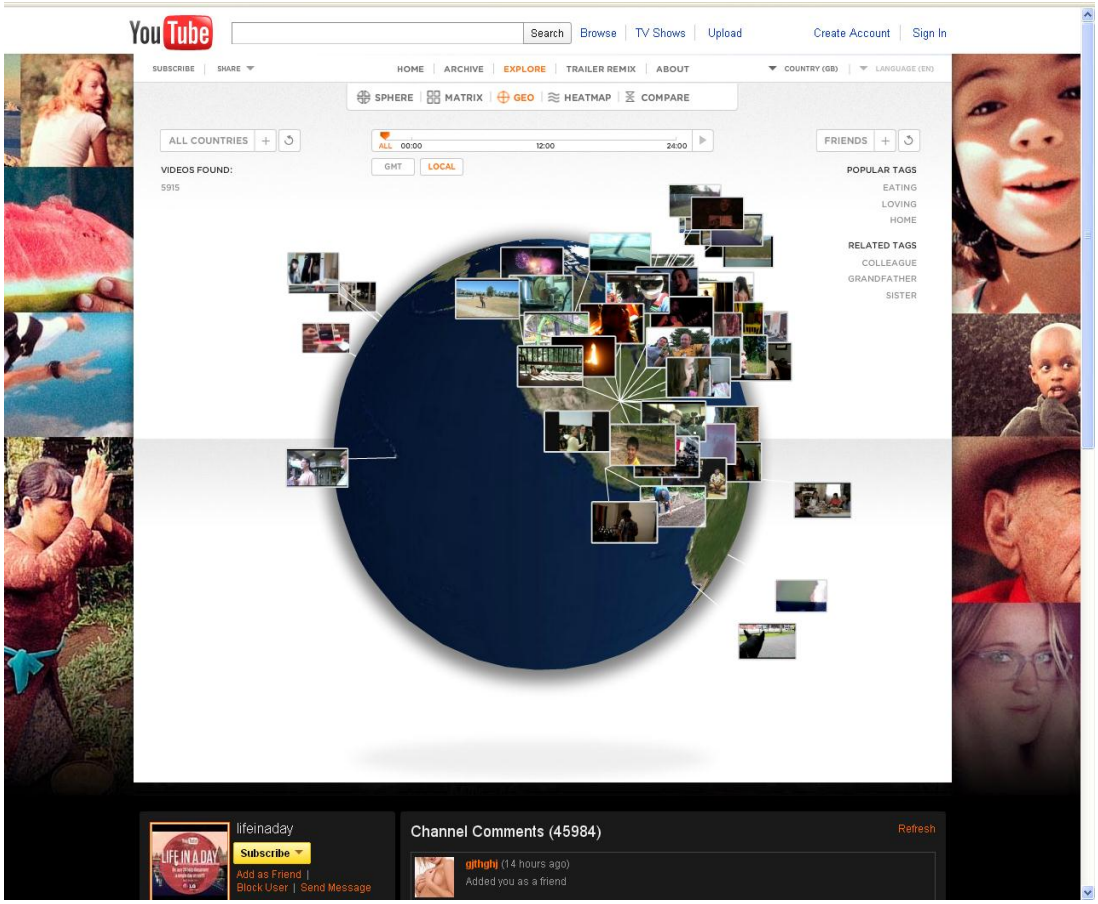

Fig. 31 - Geo-tagging interface of *Life in a Day Interactive Gallery* (http://www.youtube.com/lifeinaday)

The 80,000 people who responded to Kevin Macdonald effectively participated in the project, but in what way? And how has this collaboration influenced the production process? Their contribution was to post on YouTube, a *participant collaboration* in the form of a self-made movie, that was to populate the pre-set interactive interface of *Life in a Day Interactive Gallery* and, maybe, be selected by film editor by Joe Walker to be edited into "his" movie *Life in a Day*. What has been called a crowdsourced documentary[47] (referring to its User Generated Content) is a film where director Kevin Macdonald has not directed shots but has selected those produced by others. This is quite far from Wikipedia's logic of crowd-reviewing of a single entry, since no participant has the power either to modify other people's videos, or to edit the final film. Editing video is certainly different than editing text, and a film is not an encyclopaedia, as narrative needs to bridge all the different parts of the story. While not advocating that Life *in a Day* would have benefitted from being co-produced, co-shot and co-edited, we can still say that behind the current

[47] Wikipedia refers to *Life in a Day* as a 'crowdsourced documentary film'. Source: http://en.wikipedia.org/wiki/Life_in_a_Day_(2011_film), accessed 03.10.11.

UGC discourse of revolution in documentary praxis, the role of the author, responsible for the final narrative, has stayed intact.

When one looks at *Life in a Day Interactive Gallery* one sees a collection of mini clips produced by a multitude of co-producers who accept the authorial vision of Kevin Macdonald and Ridley Scott. What is "distributed" here is the production of the single videos - not the production of the interactive wireframe, nor the authorship of the whole idea. We must distinguish between *distributed-production* and *distributed-authorship*. *Distributed-production* has economical, aesthetic and ethical repercussions, but it does not share the authorship of the interactive documentary. Collaborative documentary specialist Mandy Rose points to YouTubers concerns about Hollywood 'cashing-in' on free content (2010:1). Benkler, on the other hand would see in this example of 'gift economy' (2006:116) the beginning of a more general mode of cultural production.

By opening up the production process a certain responsibility is also shared: without "public" contributions there is only an empty interface, which is only a part of the final artefact. Scale and variety are at the heart of the aesthetic of what Rose has called "life on earth" (2010:1) projects, referring to their intent to represent life around the globe. It is because *6 Billion Others* started with 5,000 interviews[48] that Yann Arthus Bertrand can claim that it offers "portraits of humanity"[49], it is because *One Day on Earth* collected 3000 hours of video in one day[50] that project founder Kyle Ruddick can claim that it is a 'unique worldwide media event'[51]. High number of participants' contributions gives credibility to projects that aim to portray a world made of multiple-points-of-views. These projects are potentially opened at infinitum – accepting contributions for how long they stay online, posing the problem of whether they ever reach an end, and a final form. The mosaic aesthetics of "life on earth" projects needs a multitude of clips to populate an interface that is conceived to fill a globe (*Life in a Day Interactive Gallery*, Fig. 31 and 32), a screen of portraits (*6*

[48] *6 Billion Others* also invites web and exhibition visitors to add their contributions to the online database via the use of a webcam, or through a special recording boot that is present in all the exhibition spaces of *6 Billion Others.* The project was launched with 5,000 interviews but it is now an evolving database of interviews.

[49] Source: http://www.6milliardsdautres.org/index.php, accessed 4.10.11.

[50] *One Day on Earth*'s first media creation event occurred on 10.10.10. 'The collaboration was the first ever simultaneous filming event occurring in every country of the world. It created a unique geo-tagged video archive as well as an upcoming feature film'. Source: http://www.onedayonearth.org/, accessed 10.10.11.

[51] Source: http://www.onedayonearth.org/page/history-1, accessed 10.10.11.

Billion Others, Fig. 33) or a map (*One Day on Earth*, Fig. 34). The number of participants is essential to the artefact itself. High numbers of crowd participation need to be seen through the interface in order to validate the concept behind the project: "we want to have a voice". Without that the project is meaningless and risks dying.

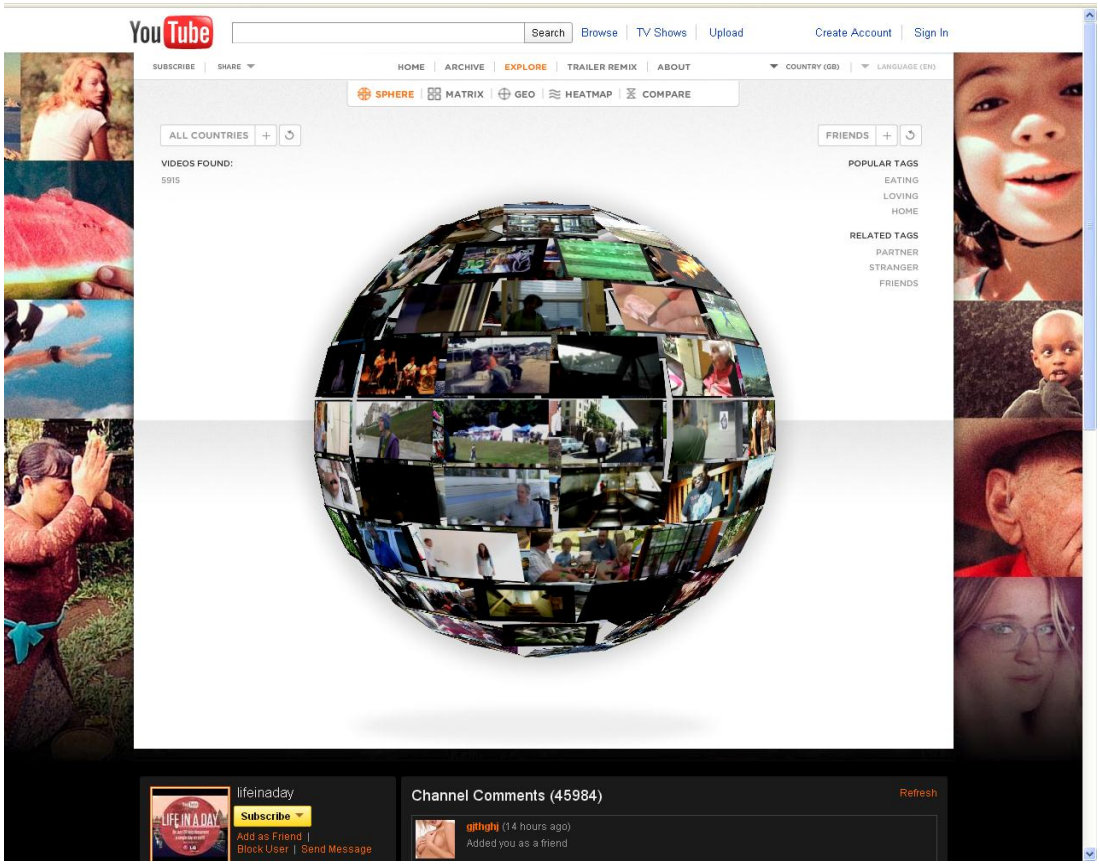

Fig. 32 - Sphere Interface of *Life in a Day Interactive Gallery* (http://www.youtube.com/lifeinaday)

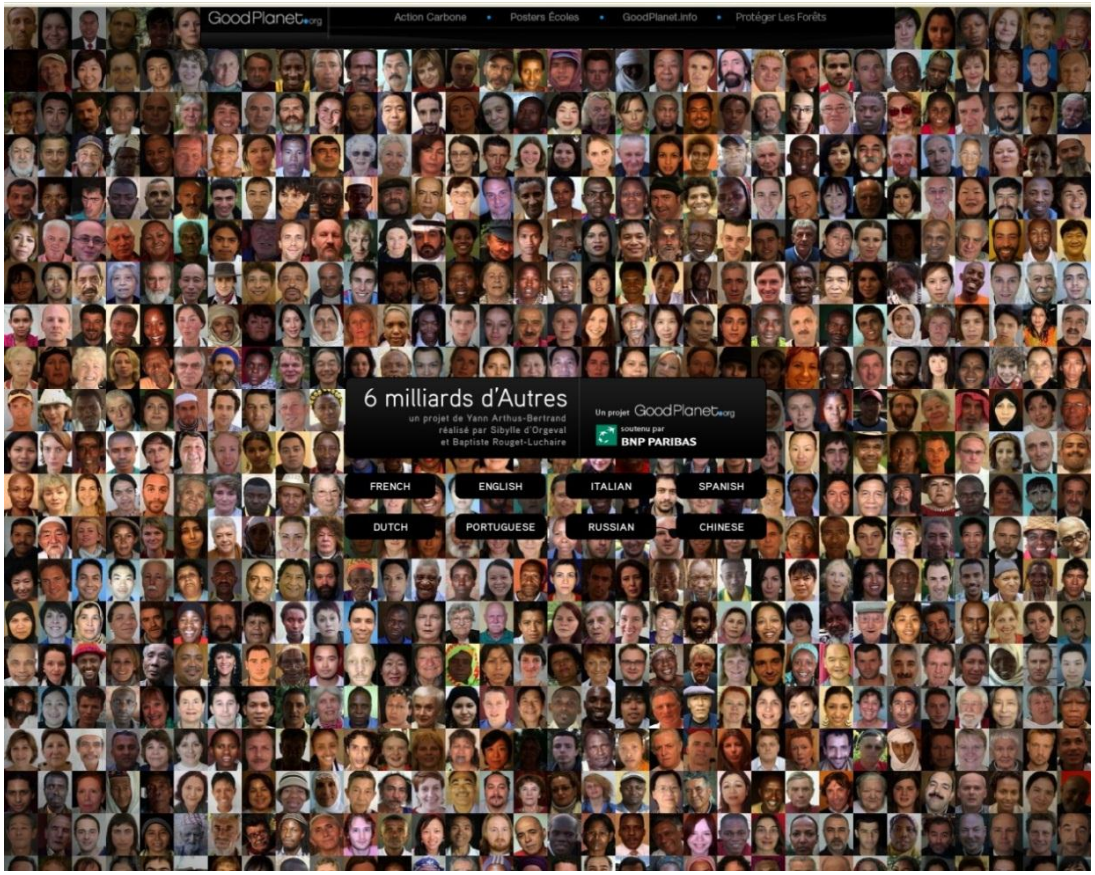

Fig. 33 - Portraits interface of *6 Billion Others* (http://www.6milliardsdautres.org)/

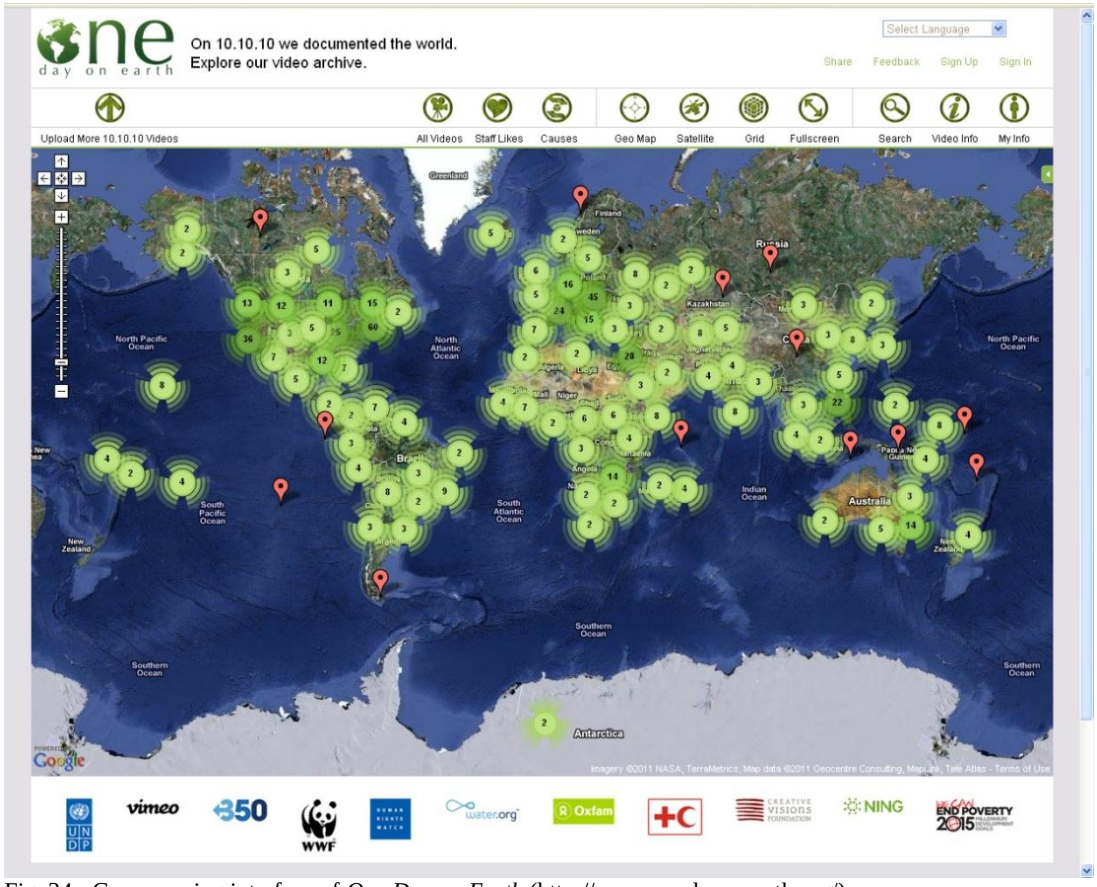

Fig. 34 - Geo-mapping interface of *One Day on Earth* (http://www.onedayonearth.org/)

If one agrees with cultural critic Fredric Jameson's notion of 'cognitive mapping' (1991:51), where the map is seen as a visualization of our 'sense and place in the global system' (1991:54) then one should question what sort of vision of ourselves, what relation between the individual, the social and the local, or global, is facilitated by the Mosaic aesthetic? The mosaic interface of such projects, characterised by the visualization of multiple entry points, wants to give the following message: our world is multiple, we are all of the same importance, your voice counts, it can be heard by all. When all videos and all thumbnails are at the same level – as they all have the same size or salience and any of them could be selected as an entry point by the user – our relation local/global, individual/society is visualized as egalitarian and open to all: the world it is what you make out of it … and you have the power to be part of its construction.

And yet, this aesthetic has its problems. By visualizing human kind within a stylistically framed wall of faces (*6 Billion Others*, Fig.33) the granularity of our differences disappears while emphasising our similarities. By filling a globe with an apparently massive amount of videos, the voices of the excluded are unrepresented (*Life in a Day Interactive Gallery*, Fig. 32). And by geo-tagging videos to a 2D map, our world appears evenly populated by people having a voice, while we all know that, even putting aside the digital divide, freedom of speech is not uniform and not a worldwide gained cause yet. There seems therefore to be a contradiction in such projects: by trying to visualize the multiple through a single uniform interface, they end up standardizing it while somehow losing the details that makes such heterogeneity interesting.

The mosaic aesthetic of the "life on earth" projects has the advantage of being a powerful populariser, as its aesthetically pleasing interface makes it very accessible and appealing to the public. But its main weakness is that by homogenizing reality it renders it flat. Once a "one format fits all" logic holds all the contributions of mass crowdsourced content, then the frame and format becomes as meaningful, if not sometimes more, than the single contributions. When *6 Billion Others* uses an interface filled by identically framed people that are ethnically different, it effectively says: "we look different, but we are all similar, in a way"[52]. The user then

[52] This myth of the universality of human condition was already criticized by Roland Barthes in 1957 as too simplistic. Describing a touring photographic exhibition, *The Family of Man*, where photos of

has to interact with the piece and listen to the individual answers of the subjects to dive into the culturally specific lives that make such subject so different one from the other.

While in linear documentaries meaning was created by framing shots and editing them together, in participatory interactive documentary meaning is shared and layered: there is the meaning of the individual clips (not controlled by the interactive documentary author), the meaning of the interface (normally conceived by the author) and the meaning of the browsing (the narrative route and associations generated by the user, while jumps between videos). The challenge therefore lies in playing with those layers to create a richer meaning, while avoiding the trap of internal contradictions.

From Cinema Vérité to interactive documentaries for change

Beside *co-authoring* and *co-producing* there is another way to include the participant in the production of an interactive documentary: *co-initiating* content. This happens when the collaboration is placed in the pre-production phase of both the video material and the interactive artefact. In this case the participant is not a "user" of a launched interactive artefact but a potential "subject" of a project in its shaping. This type of collaboration come neither from the peer-sourcing of open software, nor from the crowdsourcing of Wikipedia and YouTube, but rather from the participative school of Cinema Vérité of the 1960's and it is often linked to a social activist cause. Trans-media theorist O'Flynn recalls how for both Canadian social activist documentary series *Challenge for Change* (1967-1980) and Studio D's *Representation of Women's Lives in Canada* (1974-1996) the aim was 'of serving as a catalyst for social change into the production process itself by giving the 'subjects' of the documentaries editorial approval of the content of the film' (2012, forthcoming). Forms of editorial control were also a feature of UK access-TV. In BBC2 Video Nation a group of people were selected and given camcorders, and

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birth, death, work, knowledge and play coming from all around the world seemed to propose the idea that 'there is a family of Man' (2009:121), Barthes notices how, out of an such apparent diversity of morphologies, races and customs the exhibition tries to hint at the message that 'there is underlying each one an identical 'nature', that their [our] diversity is only formal and does not belie the existence of a common mold' (2009:121). For Barthes the myth of universality of human condition lays on the belief of nature and religion as global unifiers. One could question if in projects such as *6 Billion Others* it is still nature and religion that are seen as unifiers, or if it is the Web, and its networking action that is being mystified.

video training. Those subjects could then record aspects of their everyday lives during the course of one year. Although professional editors were compiling the final short film, contributors had a right of veto over their material and nothing was broadcast without their consent. Reflecting on the material that people did record, Video Nation's co-producer Mandy Rose[53] noticed that effectively subjects were articulating 'the gap between television representation and lived experience' (as cited in Biressi and Nun, 2005:18).

Interventionist media used the affordances of video to empower "subjects" in their own representation during the filming, and sometimes during the editing of the documentary. Subjects could become the filmmaker, the observed observer. Video was supposed to empower them, allowing the formulation of their own point of view. But nowadays the affordances of the media have changed: digital cameras, the Internet, social media empower people beyond the production of the film itself. Online movies have forums for discussion, viewers can get in touch with the "subjects" of the film by a simple click[54]… the video production has become just one part of a larger cross-media production. Interactive documentaries create a network of relations that opens the reality of the filmed 'subjects' to the world allowing them to be active during the filming process, but also in the discussion of the final artefact. Being dynamic, this network can easily create a dynamic relationship between the political and regional institutions that could change the situation portrayed in the documentary – or with other people sharing the same concerns.

In *Highrise*, a 'multi-year, many-media collaborative documentary experiment at the National Film Board of Canada'[55] Katerina Cizek explores life in suburbia and vertical buildings around the planet. *Highrise* is an umbrella name for what effectively is a series of stand-alone digital experiments that are accessible through a common website, but are totally separate experiences. The project launched in April 2010, with *The Thousandth Tower*, an interactive documentary which takes the Web visitor into the apartments and lives of six residents in a highrise in Toronto's

[53] It is interesting to notice that after a long career in participatory TV Mandy Rose has recently started a web based participatory project, *Are you happy?* that revisits Jean Rouch's seminal documentary *Chronicle of a Summer* in the context of global web collaboration, open video and HTML5. She is also the writer of http://collabdocs.wordpress.com/, a blog dedicated to the meeting point between documentary, collaborative practice and the semantic web.

[54] This was for example made possible in *Prison Valley* (2010), where web users could get in touch with the subjects of the interactive documentary in the forum hosted by production company Upian.

[55] From the "about" section of *Highrise*'s website. Source: http://highrise.nfb.ca/index.php/about, accessed 10.10.11.

interurban neighbourhood, Rexdale. At the moment of writing, November 2011, *Highrise* has already expanded into five interactive forms: *The Thousandth Tower, Out My Window* (a website and an interactive exhibition)*, Participate* and *One Millionth Tower.*

Each of those interactive forms experiment with a different logic of participation: sometimes they involve the "subjects" (*The Thousandth Tower, Out My Window*) sometimes they involve the "user" (*Participate*) and sometimes they put the "subjects" in contact with the "experts" (*the Millionth Tower*). What is fascinating about *Highrise*, is the way it evolves with a ripple effect, each wave creating a different one, separated and yet related. *Highrise* is a truly relational object: a series of 'bridges within several worlds' (Gaudenzi, 2011:2). Each sub-project depicts one aspect of highrise living. Each project makes sense in its own, but it is only when linked to the others that a feeling of complexity emerges. Two of its sub-projects, *The Thousandth Tower* and *Out My Window* specifically concentrate on the involvement of their "subjects" in a similar way to interventionist documentaries. 'Key to both the interface and narrative design of these projects is that the individuals depicted negotiate their social environments through an active and relational writing of self in place' (O'Flynn, forthcoming).

With *The Thousandth Tower* director Cizek 'began a participatory project with 6 highrise residents living in Toronto suburbian highrise, and asked them to show the world what the view looks like from inside'[56]. Using self-created images, audio and text each resident speaks about 'the immigrant experience of alienation, financial instability, lack of social support mechanisms and residential infrastructure that many low-income highrise residents experience' (O'Flynn, forthcoming). Although to its Web visitor *The Thousandth Tower* looks very much like an ordinary hypertext documentary, the way director Cizek produced it makes it a participative documentary because the subjects were actively involved in the process of production.

[56] From "the story so far". Available at http://highrise.nfb.ca/index.php/the-story-so-far, accessed 03.10.11.

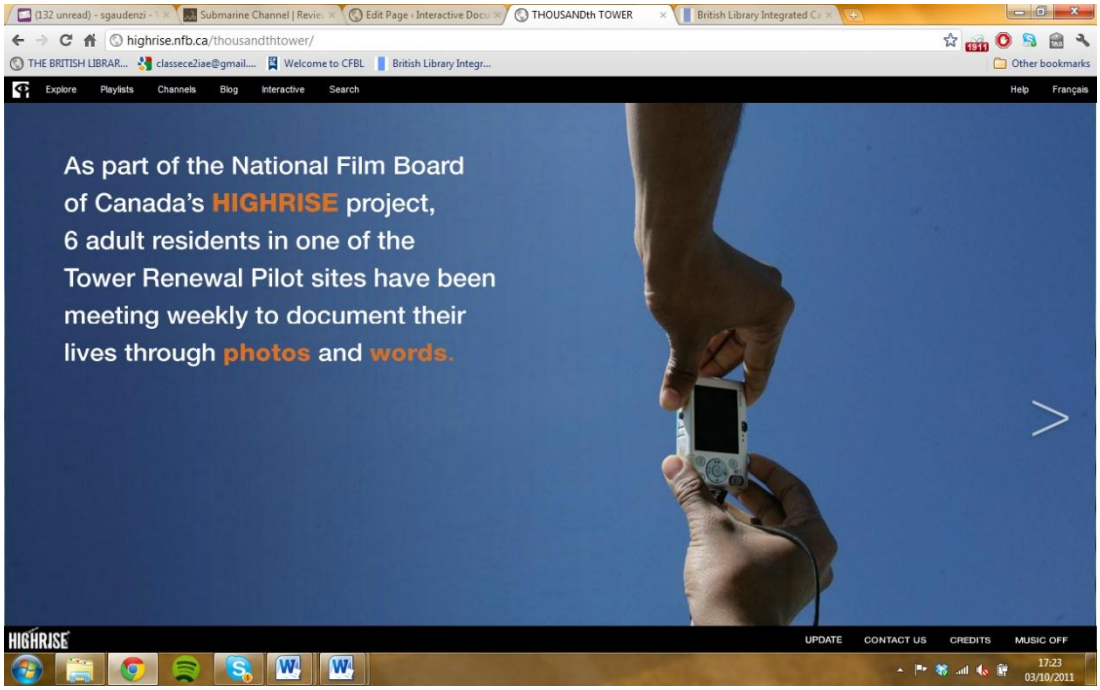

Fig. 35 - *Thousandth Tower*, screen grab 1 (http://highrise.nfb.ca/thousandthtower/)

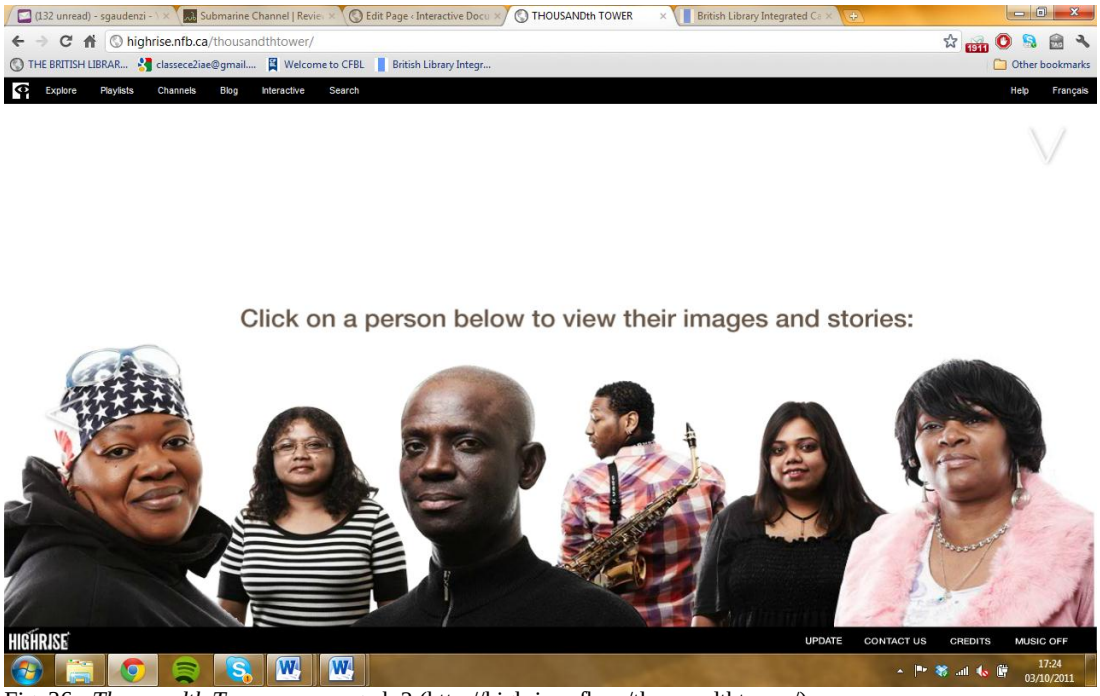

Fig. 36 - *Thousandth Tower*, screen grab 2 (http://highrise.nfb.ca/thousandthtower/)

The six "subjects" portrayed in the *Thousandth Tower* where not just found and interviewed by a filmmaker. Director Cizek and her team certainly selected them but then started a long term collaborative relationship between the interactive producer, the residents of the tower and Toronto's urban planning institutions. Those subjects were not just filmed and observed but rather placed in a dynamic for change which started with some technical training, and continued with a plan for the elaboration of

politics of change. In December 2010, Cizek announced the second stage of the project, which brought residents and architects together for *The Kipling Towers Community Design Charette.* Architects and residents were asked to reimagine the possibilities of urban rejuvenation based on the input and ideas of the residents. This had both physical and virtual consequences. The tower block's playground was rebuilt and ideas that emerged from workshop events fed into *Highrise*'s latest development: *One Millionth Tower,* an online 3D visualization space to 'bring to life the creative vision of those who are often underrepresented in these discussions but whom this initiative positions as the Resident Experts' (O'Flynn, forthcoming).

Katerina Cizek understands participation as a way to impact the world of the people she is portraying. She sees documentary 'not as a way to speak about people but to see how it can be a tool to work with for change'[57]. Her strategy of collaboration touches upon her subjects and, as a result, the aesthetics of her work is fairly hypertextual: a controlled amount of choices and routes, as opposed to an overwhelming possible entry points. Since the potential user/viewer is not a subject of the documentary there is no need to visualise the multiple, as in the mosaic aesthetic described in the previous sub-chapter.

When in October 2010 – just six months after launching *The Thousandth Tower* – Cizek created *Out My Window (OMW)* she wanted to step out of Toronto and involve the rest of the world in her exploration of vertical living. She also wanted to try a different way to collaborate with her subjects. This time she used social media to find thirteen subjects scattered around the world. Being so distant from her subjects, Cizek had to delegate the production to local crews. She could no longer meet her subjects every week, as in *The Thousandth Tower*. In *OMW* she used digital media to create a network of collaboration, but also to let the project emerge. The interface of *OMW* emerged from the contribution received. The idea of creating a fictional digital tower block from where the Web user would be able to enter thirteen different flat (spread in reality across the globe) had not been designed when starting the project, but the material received made the concept possible.

[57] Private discussion with Katerina Cizek, on the 16.09.11.

Fig. 37 - Home screen of *Out My Window* – prior to any selection (http://interactive.nfb.ca/#/outmywindow)

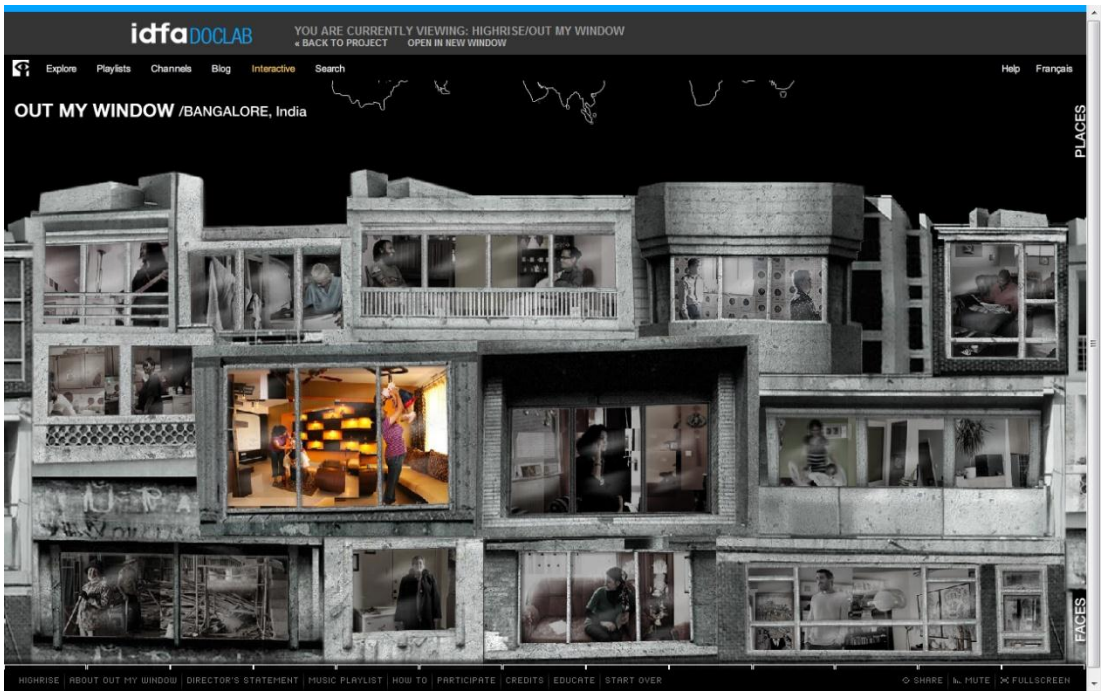

Fig. 38 - Home screen of *Out My Window* (http://interactive.nfb.ca/#/outmywindow)
Note: once one flat is selected it appears in colour

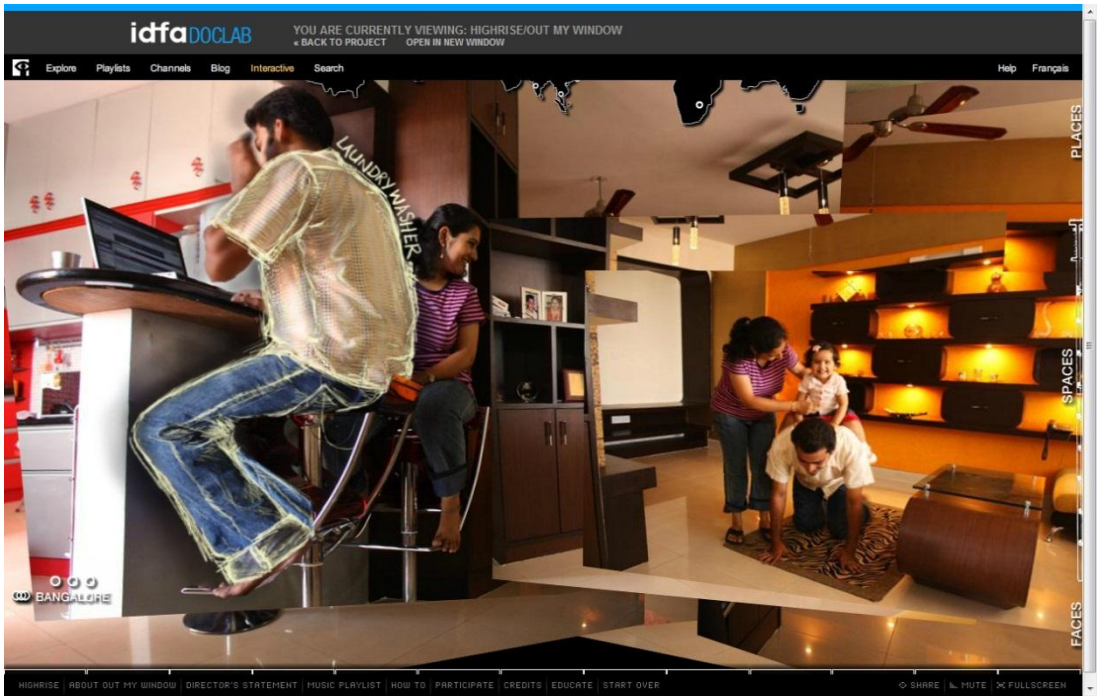

Fig. 39 - *Out My Window* (http://interactive.nfb.ca/#/outmywindow)
Note: once a flat is double clicked it fills all the screen and the user can navigate in it by using the arrow keys (or clicking and dragging)

The subjects were active in the "pre-production" phase in what is called "asset production" in *Out My Window*'s production schedule[58]. Those "assets" will be edited together by Cizek and her team and it is only then that the "architecture and design" of the public website will be created.

There are now two stages where Cizek's authorial voice is being expressed: the editing and the interactive design (leading to *OMW*'s online interface). In her presentation of *Highrise* at the British Library, Cizek said "in a project like this the navigation itself is the content. When you scroll around that 360° collage, to me that is content. You are creating meaning as stories appear and sound unfolds" [59]. The unfolding of personal stories and memories was carefully orchestrated via details: objects that are in the flats, and that carry the stories of their users, have been used as entry points to unveil the subject's narratives.

> This is a story that would not necessarily translate well into a 90 minutes feature film. People that are doing films are looking for extremely strong characters that are going through some sort of life changing transformation. There is a beginning, middle and an end to what we witness in the story. Whereas here [in *OMW*] the units are really very

[58] Wording taken from Cizek's presentation slide, British Library presentation on the 16.09.11.
[59] From private recording of Cizek's presentation, on the 16.09.11.

> small, they speak about the details, the minutia of everyday life. And that is what I love about the Web, because it honours that everyday experience. I think (…) it opens up a whole new series of opportunities in storytelling. (Cizek, recorded interview, 16.09.11)

Those details could only be picked up by the subjects themselves. They are the only ones that can "give a meaning" to objects that would appear neutral to any outside observer. When possible, and suitable, Cizek allowed her subjects to document their habitat by themselves. Seventy per cent of *OMW* content's comes from people whom Cizek has never met in flesh[60]. She communicated with them via Skype, Facebook or e-mails, sometimes not knowing what they were producing until she received the footage. A Cuban girl independently decided to interview her own father and then sent the footage by courier to Canada. Other people requested a professional photographer but were happy to record their voice by themselves. Is this content crowdsourced – open to anyone that wants to participate, as in *Life in a Day* - or peer-sourced – open to specialists, as in *RiP: A Remix Manifesto*? Neither of those two: there is no open call for video participation, and *OMW*'s subjects are not Cisek's peers. The participants are not a huge crowd (leading to crowd-production of a mosaic aesthetic) nor a specialist team that wants to share Cizek's authorship (leading to co-authoring). The material is not even user-generated, it is subject-generated. When I asked Katerina Cizek her views on UGC she replied "I am not interested in User Generated Content, I want to maintain an authorial role"[61]. She is the facilitator, and as such she maintains the authorship of navigation, which she considers as a form of content. What she opens to collaboration is the voice given to the subject. She accepts *subject-producers*. This makes all the difference. It makes a difference for the subjects: they are not to be one of the thousand points of view of a mosaic, but rather a character who can use digital media to empower herself. They are co-initiators in a process that will shape the documentary, shape its database and maybe change their lives. It makes a difference for the user: the Web viewer of *OMW* is external to the project. She is navigating into a hypertext documentary, with the power of browsing through it but not of adding to the database (not even comments). Finally, it makes a difference for the digital artefact: with 90 minutes of material *OMW* goes deeply into the life stories of each subject, it is composed of

[60] Information given during Katerina Cizek's presentation of Highrise at the British Library on the 16.09.11.
[61] Recorded conversation, 16.09.11.

thirteen portraits linked by an interface that uses details as entry points and a mixture of media (audio, photos, 360 degrees video) as ways to play with the notion of time, place and memory. Videos are used when live action happens (a Tibetan family plays traditional music together), but photos with audio are used to zoom back into the past of each subject (a miniature Yak is the entry point for childhood memories). Although *OMW* is a participative project, it looks and feels totally different from *Life in a Day Interactive Gallery*. Participation is not opened to everybody as it is not placed in the Web user's hands - rather in the subjects of the piece. To the Web visitor it has an hypertext aesthetic: clicking, going in and out (making sense of and exploring someone's else world) and yet it uses a participatory mode of interaction with its subjects. *OMW* plays on the distinction between the *active-subject* and the *active-user*.

Ultimately Cizek takes the responsibility to frame her active-subjects' voices by fitting them into a precise interface that she mainly designs without the intervention of her subjects. This is a conscious choice as Cizek believes in documentary authorship and considers her role to be the aggregator-narrator of those voices. A similar project had tackled similar issues, but ten years earlier. *Superchannel,* by activist artist group Superflex, had proposed a completely different solution to the question of subjects' participation. This project is of particular interest because it questions whether the role of the director is ultimately to facilitate subjects in using media, and owning their voice, or to frame such voices within a product that subjects only partially own.

In 1999, the early days of Internet TV, *Superchannel*[62] offered the residents of a tower bloc in Copenhagen[63], the possibility to broadcast their own program through Internet TV. Effectively technology was used as a tool for social empowerment where anybody could at any moment open her own channel. The format was designed to be so simple that anybody with a computer and a web-camera could participate. The result was a multitude of self-organized shows where residents

[62] *Superchannel* is a company started in 1999 by the *Superflex* artist community, in collaboration with programmer Sean Treadway. It offered live Internet TV, using cheap, existing technology and software. Anyone who wanted to start their own channel had just to send an email with a proposal. Every show had its own live online chat-room where viewers could discuss the program and talk directly to the broadcasters. It was designed to be used by anyone with access to an ordinary computer, a video camera and an Internet connection.

[63] The first Superchannel was broadcast from Artspace 1% in Copenhagen in the summer of 1999 broadcasting live music and a regular dub reggae show. Since then a wide variety of other channels have started up in other countries (for example in the UK, Japan and Thailand).

would talk about music, local issues or sport. A parallel between *Highrise* and *Superchannel* shows how two different approaches to social empowerment can lead to different forms. While *Superchannel* looked like a series of amateurish shows, *Highrise* presents itself as a sleek and polished interactive documentary. But behind the aesthetics the impact is different: *Highrise* uses local content to be distributed globally via the Internet, hoping that in the process things will change locally and globally, while *Superchannel* effectively gives ownership of the medium to its subject, instantly projecting them into a potentially worldwide audience. Cizek works with her subjects, but she stays is stylistic control because she believes her role is to tell their stories. She is the author. *Superchannel* on the other hand wanted to empower residents with a tool, and to stay away from the form, the stories and aesthetic it would take - as the challenge was to give people ownership of the tool hoping that through it they could discover their voices. *Superchannel* activist Will Bradley wrote on their website: 'TV might not be just as something everybody watches, but something everybody does' (Bradley, 2001:1). This probably depends on who one wants to target with the artefact. *Superchannel* shows have very little viewing interest to who does not live in the tower block, but they are probably very relevant to local residents. On the other hand *Highrise* has a clear appeal to a vast audience that is interested in highrise living, or interactive documentaries, but it somehow restrains the voices of its subjects. The difference between the two projects is in nuances of power levels given to the subjects. To what extent does the author want to empower the subject? Also, when it comes to speak about the subject's lives, who is ultimately the expert, the interactive producer or the subjects themselves? The proposition that they can collaborate in sharing their expertise is probably what makes *Highrise* such a successful interactive documentary.

Strategies of participation: the who, what and when

Participation, in an interactive documentary, can happen in a multitude of ways and at different stages of the production process (of both content and digital interface).
We have looked at some significant participative documentaries created to date, in each case identifying the particular logic of participation involved. It has been argued that to assume that collaboration is synonymous with User Generated Content

is simplistic and confusing. User Generated Content is a term that comes from the blogosphere that emerged with Web 2.0 participatory culture and it assumes that users are pro-sumers. What the term does not do, is identify the users, the type of content they generate, and their target audience. In order to arrive at a more nuanced definition of what collaboration might mean in the context of interactive documentary production, we looked at the origins of key terms including crowdsourcing, open source and peer-sourcing. We found that these terms lack precision when applied to participative documentaries because they imply strategies of participation that worked for specific digital products (software, blogs, encyclopaedia etc…) but that are often not applicable to documentary praxis.

For all those reasons, I propose to step out of participative media terminology and consider collaboration in interactive documentaries by questioning its impact on the production of the artefact: who is invited to collaborate, what are they allowed to do and when does this collaboration happen?

- Who is invited to participate?

  When a group of experts is invited to participate in a project, as in the case of the re-mixer community invited by Brett Gaylor in *RiP: a Remix Manifesto*, then those collaborators effectively become *peer-producers* of the final film, even if the author retains editorial and authorial control. They are *peers* because they are re-mixer experts (they share a certain level of knowledge and passion for a specific topic) and they are *producers* because they affect at least one stage of the production of the film (in the case of *RiP*: its research and its editing).

  When the participant is a crowd of non-experts, like the mass invited to send video material to YouTube channel's *Life in a Day*, or the viewers who choose to add their voice to *6 Billion Others*, then those collaborators are *crowd-producers* of a potentially evolving database. Not only every user can collaborate but, as long as collaborations are sent, the piece keeps growing in scale.

  When the participants are people portrayed in the documentary, the subjects of the stories, like in the *Thousandth Tower* and *Out my Window*, then those effectively become *subject-producers*. Subject-producers are a limited number, often selected by the author, but they are given a freedom that a documentary subject normally does not have: participate in the documentation of herself.

Deciding *who* is to participate is one of the political decisions of the author. Documentary activist Katerina Cizek involves her subjects hoping that this will create a dynamic of change. Open source activist, Brett Gaylor, makes the choice of using peers to give credibility to his work and to de-bug potential mistakes. Filmmaker Macdonald opts for the involvement of the crowds because he needs their multiple voices to speak about a world that he wants to represent as multiple and polyphonic.

- When is the collaboration happening?

  Documentaries that open the pre-production and production of their content (rather than of their interactive interface) to subjects, or peers, tend to accept external input during a temporary phase, but do normally end up being highly authored as a hypertext documentary (*Out My Window, The Thousandth Tower*), as a linear film (*RiP: a Remix Manifesto, Life in a Day film, The Waiting Room*) or as a performance (*Overheated Symphony*). When the collaboration is not only about content, but also about sharing the governance of the project (*Global Lives*), then the form of the documentary keeps changing following the views of a dynamic collective.

  When the participation accepts content after the launch of the interactive interface (so to populate an existing interface that is already available to the user) then the documentary is normally opened to a multitude of contributions and often acquires a mosaic aesthetic (*6 Billion Others, Participate, Life in a Day Interactive Gallery*). A mosaic interface tries to place all the contributions in a single screen. Its challenge is to visualize a growing number of contributions (the project may have no limits to accepting new content) and to offer the user an entry points for each of them.

- What is the participant supposed/allowed to do?

  Doing a list of the participant's possible actions would be pointless. Effectively what matters is the degree of freedom given to the participant, as this has ontological consequences. Is the participant only able to speak about herself (*Out my Window*) or can she challenge the edits of the author (*RiP: A Remix Manifesto*)? Is the act of participation only reactive (commenting in *Prison*

Valley) or can it be constitutive (*Mapping Main Street, the Johnny Cash Project, 6 Billion Others*)? And even when the participant adds to the documentary by adding content, changing the database size and form, to what extent does such collaboration also touch its internal organization, the interface itself? Degrees of power and the consequent positioning of the individual in society is what can be read behind the agency given to the participant.

The strategies of participation seen so far give different levels of freedom to different actors at different times. While a multitude of projects have emerged in the last five years, it is still extremely rare for the contributor to be allowed to affect the interactive interface, hence the mode of interactivity, of the documentary. This would lead to levels of co-authoring of the interactive artefact that are currently difficult to imagine. It is one thing to visualize the multiple within an interface, and quite another to allow the multiple to build such interface.

Over all, most participatory interactive documentaries have experimented with degrees of collaboration that have challenged modes of production and the meaning of what authorship might be. What Dovey and Rose have called *distributed authorship* (forthcoming) would perhaps be better described as *distributed-production.* If the "who is the author of the content" has been challenged, the "who is the author of the concept" has not. In the young field of digital collaborative production, models of leadership do not seem to have evolved significantly since the days of open source software collaboration. Eric Raymond notices in *The Cathedral and the Bazaar* the existence of three open source models of ownership: 1. the benevolent dictator with his co-maintainers, 2. the voting committee (with no single leader), and 3. the rotating leadership. Raymond states that the benevolent dictator is historically the preferred model within the hacker community (1998:110). The same seems to have happened in participative documentary making: the author is still very much present, she might not be in control of the content of the piece but, ruling as a benevolent dictator she orchestrates a mixture of peer-producers, crowd-producers or subject-producers.

To my knowledge, apart from *Echo Chamber Project*[64] which was never completed, the only interactive documentary trying to challenge the benevolent dictator model of authorship is *Global Lives*. David Evan Harris has been experimenting with a voting committee model, opening certain decisions to a group of collaborators. It is because of its challenging approach to authorship, and its possible political, ontological and aesthetic implications, that I have chosen *Global Lives* as main case study for participative documentaries. The following sub-chapters will use the relational methodology described in chapter two to analyze *Global Lives*. What can we understand about such project by seeing it as a Living Documentary?

[64] The *Echo Chamber Project*, by filmmaker Kent Bye, started in 2002 when Bye decided to act against the absence of independent journalism during the build-up to the war in Iraq. 'I watched and recorded five months of ABC, CBS and NBC footage leading up to the war' says Kent in his blog, 'then in the summer of 2004, my wife and I went on a journey of interviewing 45 different experts who described the general symptoms and underlying illnesses of American Journalism as well as the specific pre-war media failings' (source: http://www.echochamberproject.com/node/2971, retrieved 20.09.09). During the first six months of the conflict Kent recorded all major news coverage on the subject (from ABC, CBS and NBC American television) and conducted more than 50 hours of interviews. He then wanted to upload the material online and invite users to tag and rate the visual clips in order to place them on play lists that would respect the collective user's point of view, rather than the media point of view, or his own. In his blog Kent calls this process 'collaborative sense making': ideally, he says, 'such system would allow people to add their own context through each of these phases in a way that is both easy to participate and easy to productively make sense of the user input in a cumulative fashion' (source: http://www.echochamberproject.com/ /collaborativesensemaking, retrieved 10.10.09). Effectively Bye wanted to let the crowd edit the film. Unfortunately, after being donated a $55,000 production grant in 2007 from an unnamed foundation, the project seems to have stopped. Kent's blog went silent after his entry of the 01.05.2007-and is now not online anymore.

Global Lives – a case study of participative mode

Global Lives is a global collaborative project that started in 2004 when cross-disciplinary mediamaker[65] David Evan Harris decided to record a day in the life of a cable car operator in San Francisco. The idea was to record 24 hours in the life of ten people who live in totally different places on the world. These ten subjects were to be chosen to be demographically representative of the global population, so that they would match the global distributions of rural versus urban population, regional distribution, gender, income level, religion, and age. Back in 2002, when Harris first had the idea of *Global Lives*[66], the Internet was not a very efficient platform for large video files. Harris, who was then studying at Berkley University, felt that his academic writing was not the right medium to speak about the social justice issues he felt passionate about. He wanted to find a more emotional way to portray the difference in living he had witnessed during his student traveling. Inspired by some video installations that had touched him[67] in the past, he chose video installation as the platform for his project. Not being a filmmaker he did not want to do a documentary, he just wanted to capture raw rushes and make them public in a Western cultural context. He had no intention to edit those rushes, as they were to represent a typical day in the life of his subjects. 'There is no narrative other than that which is found in the composition of everyday life, no overt interpretations other than that which you may bring to it', states the "about" section of the *Global Lives*'

[65] This is the term Harris has used in his online bibliography. The full sentence is 'David is a cross-disciplinary mediamaker, working at the intersection of art, activism and academic inquiry on the politically charged questions surrounding globalization and social justice'. (Source: http://globallives.org/en/community/node/85/, retrieved 7.12.11). His background is in Sociology, but he has also written a book, *You Will Serve Me*, a comparative ethnographic study of relationships between domestic workers and their employers in Brazil and the US. Harris does not come from a documentary background at all and, in a conversation we had on the 15.11.11, he admitted that the world of film production does not interest him at all. For him *Global Lives* is an ethnographic experiment that links his interest on the cultural effects of globalization to his belief in collective practices as an alternative model of cultural creation.

[66] On his third year as an undergraduate at Berkley Harris spent eight months abroad for his studies and lived with families in Tanzania, India, Philippines, Mexico and the UK. In an interview with Mandy Rose, Harris explains how this experience made him made him want to 'communicate not just the political and social justice issues and deep inequality that I [he] had seen, but also the emotional side of this experience of travel and life outside of my [his] tiny bubble in the US' (source: http://collabdocs.wordpress.com/interviews-resources/david-evan-harris-on-global-lives/, accessed 7.12.11).

[67] Harris recalls being particularly touched by the Nam June Paik retrospective (the Worlds of Nam June Paik, 2000) and the piece Going Forth By Day, 2002, by Bill Viola – both exhibited at the Guggenheim Museum. .

website[68]. So the original idea was to show videos of different life experiences side by side, and leave the audience to build its own path of interpretation.

> By extending the long take to a certain extreme and infusing it with the spirit of cinema verité, we invite audiences to confer close attention onto other worlds, and simultaneously reflect upon their own. The force and depth of human difference and similarity are revealed in this process. Gaps which mark cultural divides feel, at once, both wider and narrower. This sense - that we, as humans, are both knowable and unknowable, fundamentally different as well as the same - opens a space for dialogue. (http://globallives.org/en/about/, retrieved 7.12.11)

It was only a few years later, when the Internet proved to be a viable platform for video, that *Global Lives* also took form as a website. Here what interested Harris was to make the footage available to all – as opposed to using a gallery venue which is, by nature, a local platform. Harris also wanted to use the collaborative praxis that Web 2.0 was facilitating as he wanted his project to be participatory and non-profit. As a result, the *Global Lives* website, as we can see it now[69], has been totally made by volunteers. But what can be seen online today is not a fully developed interactive documentary yet. The free open video archive of all the footage shot that Harris wanted to make available to all is not online yet. So far the website has been used as tool to disseminate an idea that is still in progress and which welcomes more collaborators. So, in choosing *Global Lives* as a case study, it will be important to make the distinction between its vision and its current state, and also between the Web used as a production platform and the Web used as a distribution platform for a cultural artefact. *Global Lives'* website is both the place from where peer-production is initiated and governed, and the place where the artefact - as seen by the people who are not collaborating in the project - is slowly taking form.

At the moment of writing, November 2011, the ten shoots that were originally planned have been concluded. The information about them is online, but the rushes are still to be uploaded on a dedicated YouTube Channel and on the Internet

[68] People who consider editing as the only way to pass across the voice of the documentary author will struggle to see *Global Lives* as a documentary at all. My position is that form, location and media are themselves part of the documentary narration and I therefore consider that several streams of unedited rushes shown in a public gallery (or on the Web) do represent a creative treatment of actuality, and are therefore part of the documentary family. The layers of interaction that are added to this project, and that will be discussed later, will then position *Global Lives* in the family of participative interactive documentaries.

[69] As in November 2011.

Archive[70] – with a Creative Commons Attribution-Share Alike Licence[71]. Also, in the strategic plan for the years 2011-2013 that Harris has kindly allowed me to see and refer to, plans are to hire a full time Production Coordinator and to raise money to develop the website to a new phase are indicated as a priority.

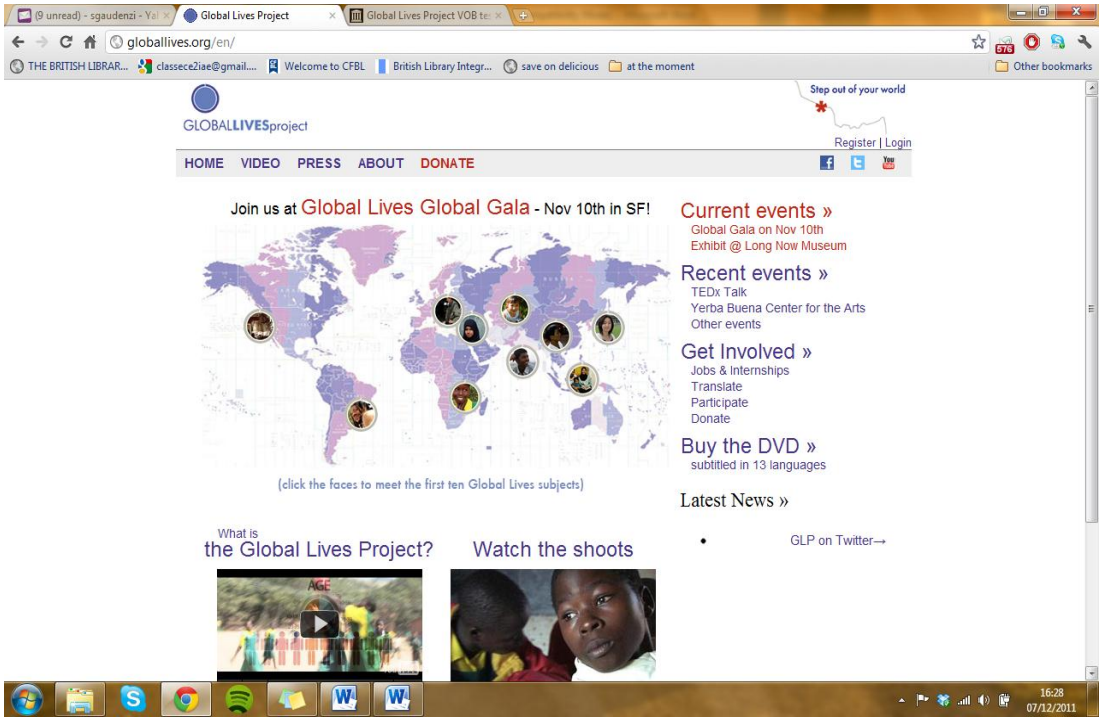

Fig. 40 - Home screen of *Global Lives* (http://www.globallives.org/)

I have chosen *Global Lives* as a case study for the participative mode for a series of reasons. First of all *Global Lives* is a project in flux – in the sense that it is in construction – and so it has been for the past nine years. This state of flux is partly a consequence of the self-financing model that is at the base of the project (a slow fund-rising process that does not allow a quick production cycle) but also to the collaborative governance model that Harris is exploring. Harris has been inspired by Wikipedia's model of governance and he is trying to apply it to the documentary world. Techniques of crowdsourcing were used to find potential contributors to the shoots, crowd-financing was used to sustain the project and, as will be explained in detail later, a system of collective governance is ruling the future developments of

[70] See http://www.archive.org/details/GlobalLivesProjectVobTest for the first rushes that have been uploaded by *Global Lives*.
[71] Which means that one is free to share, remix and make commercial use of the work, but one needs to attribute the original author and re-distribute the final work through the same license.

the artwork. The attempt to use peer-production and collaboration on both the production and the concept levels is a second reason to look deeper into *Global Lives*. Through it, new modes of cultural production, politics of participation and levels of ownership can be explored. Benkler's concept of 'commons-based peer-production' (2002:8) - as a new possible route in comparison to market and firm production logics - will be particularly useful in understanding why *Global Lives* is still alive, and to evaluate its chances of evolution and survival. Finally, it is the unfinished nature of *Global Lives* - a project that has managed to grow during the last nine years - that is particularly fascinating, because it allows degrees of change (both of its global concept and of its specific content) that were not possible in the projects analysed so far. This seems to indicate a high level of interactivity and a high level of autopoietic behaviour.

Although Harris clearly plays a determinant role in the project, the collective nature of the organization he has created means that *Global Lives* might take directions that its initiator could not foresee and of which he might not even approve. The incorporation of collaborators into the changing nature of the projects blurs the notions of observers-observed, filmmaker-subjects and environment-subject which we analysed in the first three chapters of this research. Seen in this light, *Global Lives* questions how open an interactive documentary can be to its environment. Can a participative Living Documentary be so open to changes that it allows changes to its own internal organization?

I am aware that analysing a project whose final form is still evolving means that one has to look at what is present and at what is planned for the future, knowing that aspects may change several times. Compared to the last two case studies, *Global Lives'* analysis will have to take a more speculative approach. The relational methodology proposed through the concept of the Living Documentary will have to be flexible enough to look at potential relations – rather than at existing ones.

Global Lives through the lenses of the Living Documentary

The argument of this research is that interactive documentaries, which I have called *Living Documentaries*, can be better understood when looked at as assemblages (with internal and external relations) characterised by levels of interactivity and with

levels of autopoietical behaviour. Each digital artefact combines those aspects in a unique way, and this is one of the reasons why each Living Documentary is unique.
The following sub-chapters will therefore ask what type of Living Documentary *Global Lives* is. As in the two previous chapters, we will first identify the dominant set of heterogeneous dimensions that compose *Global Lives*. These internal and external relationships of the assemblage determine what, in autopoietic terms, would be defined as the organization of *Global Lives*. In the case of *Global Lives*, this question maybe not be suitable – as *Global Lives* is a project still in construction, and therefore what is analysed in this research is a temporary form. Such form is particularly opened to change – because it does not only accept new content and new participants, but it also envisages changing its overall structure and main concept.
The next stage will be to concentrate on how the structural coupling of the artefact with its environment affects the identity of both *Global Lives* and its participants. Which role can collaborators take and how does is this affect their *power* relation with the artefact? Finally, we will look at what stabilises, or destabilises, *Global Lives* and will question when, and how, does such an artefact stops functioning.
The four main points of analysis will be consistent throughout all the case studies of this research. We will look at *Global Lives* through the following questions:

1. What are the main components and dimensions of *Global Lives*?
2. What is its organization and can it change or evolve?
3. Do such changes affect *Global Lives*' identity, and/or the identity of the systems that are related to it?
4. What stabilises it or destabilises it, and what would cause *Global Lives* to halt or die?

1. What are the main components and dimensions of *Global Lives*?

The components that had been identified in the *[LoveStoryProject]* (case study of hypertext mode) were the Korsakow software, the online interface, the copyright, the Web platform, the media (as mixed media), authoring (as the initial conditions set by the author), the enactor (as the one who "acts") and the participant (as the content, the interviewed subjects). These were seen as major components in the sense that together they make the *[LoveStoryProject]* possible. In a hypertextual way the

dimensions – that were defined in chapter two as a network of relations that links the components that make the Living Documentary possible - emerge by linking different components together. For example, by linking the Korsakow software, its online presence, its particular interface, and the authoring done by Florian Talhofer one can start to unpeel the hypertexual aesthetics that resingularises the user at each one of her clicks. By connecting those *components* one can analyse the *[LoveStoryProject]* from one specific direction, which I have called *dimension*. The dimension that makes the click possible creates a choice, within a world of pre-set possibilities that allows the user to exist through such choice. As seen in chapter three, this mode of subjectivisation is typical of the hypertext mode.

In *Rider Spoke* (case study of experiential mode) the dominant components were the interfaces (both the city and the mobile device), the media (understood as the portable device and the bicycle), the space (seen as Topological rather than Euclidian), the city (seen as an interface but also as an independent entity), the authors (Blast Theory and the participants) and the users/participant/collaborators. Using the Living Documentary relational approach with *Rider Spoke* allowed us to see that space is a dominant dimension in experiential documentaries because no relation between components could make sense without the 'situated actions' (Suchman, 1987:8) in what becomes an affected space through the participation of the users.

However, identifying the components of *Global Lives* is quite challenging because they are not the same if we focus on the project as it is now, or on what it is currently designed to become. At the time of writing *Global Lives* exists as a series of video exhibitions, as a YouTube channel, as an educational DVD and as an unfinished website. An exhibition has been held at the Yerba Buena Centre for the Arts in San Francisco, where the ten films done so far were shown from February till June 2011. The atrium of the Centre was big enough to provide a central space that could accommodate all the videos at once and some separate spaces were used to view the videos independently.

Fig. 41 - *Global Lives*' exhibition. Yerba Buena Center for the Arts, San Francisco, 2010. (http://www.globallives.org/)

Fig. 42 - *Global Lives'* exhibition: separate spaces to see individual 24 hours videos (http://www.youtube.com/watch?v=GHbDGMzdl0g&feature=player_embedded)

In trying to grasp the realities of everyday life from Lebanon, Serbia, China, India, Japan, Malawi, Indonesia, Brazil, Kazakhstan and San Francisco *Global Lives* raises exactly the same questions that *6 Billion Others* does with its touring exhibition: what is representative about the lives of those ten people? The only difference is that

here what is shown is not a multitude of answers to the same forty questions, but several 24 hours performances: scenes of a representative day rather than a collection of interviews about typical days. But how representative can a day be of what effectively is a constantly changing flux of events and affects? Is it too simplistic to choose ten people and assume that they can say something about the diversity of our world? As Roland Barthes has already eloquently suggested in *Mythologies* (2009, first ed. 1957): there is no standard life, as there is no 'family of Man' (2009:121).

Now that *Global Lives* has reached its first target of ten films it is opening up to more shoots. In its 2011-2013 Strategic Vision document[72] *Global Lives* has set as a key action to complete at least 20 more 24-hour shoots. But, will there ever be a number that will make such project more or less representative of our lives? What could more shoots add to the project… the validation of the concept? A richer narrative? Greater complexity for the viewer? And to what extent is the exhibition participative or interactive? In *6 Billion Others* a stand allows people to add their answers to the collective database of the project by recording their own voice and video. But in *Global Lives* the participation of the audience is limited to the act of interpretation while moving their glance from one screen to another other in an exhibition space. Participation in *Global Lives* is not placed in the hands of the exhibition audience: this happens during the production stage. The collaborators are actually the local producers and the filmed subjects, who could be Web users, friends of friends, social networks friends, but not the exhibition audience.

The first shooting in San Francisco was done by Harris and a friend of a friend of his, James Bullock in 2004. It was as an experiment, a proof of concept. Harris and Bullock were both using some time off, and the rare opportunity of having free video equipment at their disposal. Harris then went to live to Brazil, where he continued to film for *Global Lives*. From there he looked for a potential filmmaker in Japan. Not being a filmmaker himself, and not having any funding, he looked for a volunteer crew through e-mails, friends of friends and Facebook. Harris received twenty answers within one week. Boosted by this response he created a structure whereby volunteers who wanted to do a shoot could write a proposal and submit it to a group of previous producers, editors or project participants. This group would then vote to

[72] Courtesy of David Harris, as he allowed me to see and quote their Strategic Vision Plan.

approve the shooting project. Basecamp[73] was used to communicate with the group and to send regular updates and questions to all the people that had joined as collaborators. This is how the collective governance started, it was a mixture of Harris' fascination for the Creative Commons idea, the inspiring role model of Wikimedia's Foundation, and the fact that with no money the project could only be sustained with the support of volunteers.

In its current shape, *Global Lives*' website acts as both an aggregator of information for its collective and as a crowdsourcing tool to reach the audience who will eventually be able to participate (Fig. 43).

Through its website *Global Lives* reaches potential future producers and organizes its "confirmed collaborators" through a Forum (Fig. 44) and a Wiki page (Fig. 45). Anyone who has collaborated to *Global Lives* for more than 24 hours of their time can become part of its collective[74]. This mean that anyone who has either shot, translated, post produced or helped in raising money can be part of a collective of people who take both production and strategic decisions. A Production Committee of the Collective, formed by the most active people takes decisions on production matters, while a more restricted Board of Directors makes financial and strategic decisions. One or two representatives of the collective are present on the Board of Directors – very much in the same way that a few representatives of Wikipedia collective are members of Wikimedia's Foundation through the Board of Trustees. Harris openly acknowledges that he was inspired by Wikipedia's governance model.

[73] Basecamp is an online project collaborative tool that enable a group of people to share information, links, agendas and forums. For more about it see http://basecamphq.com/, retrieved 22. 03.12.
[74] From a recorded interview with David Harris, on 15.11.11.

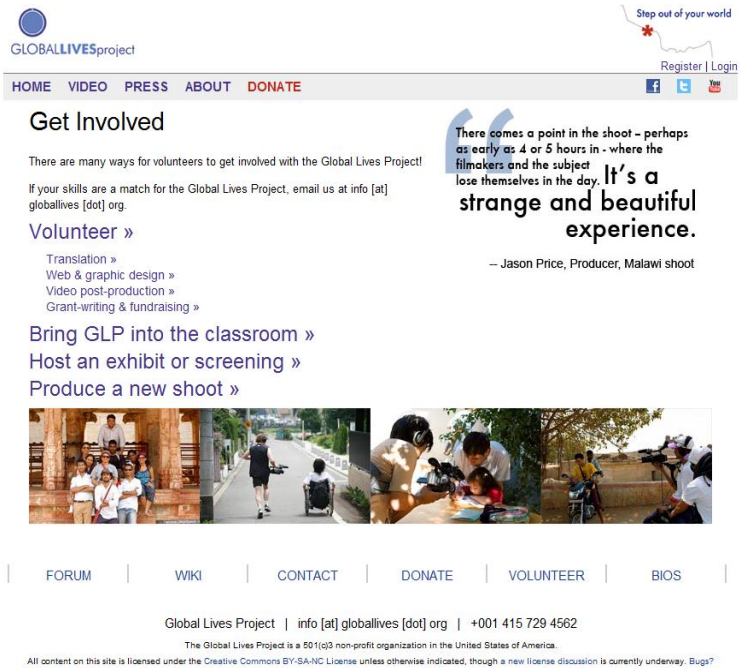

Fig. 43 - *Global Lives'* call to action: Get involved (http://globallives.org/en/getinvolved/)

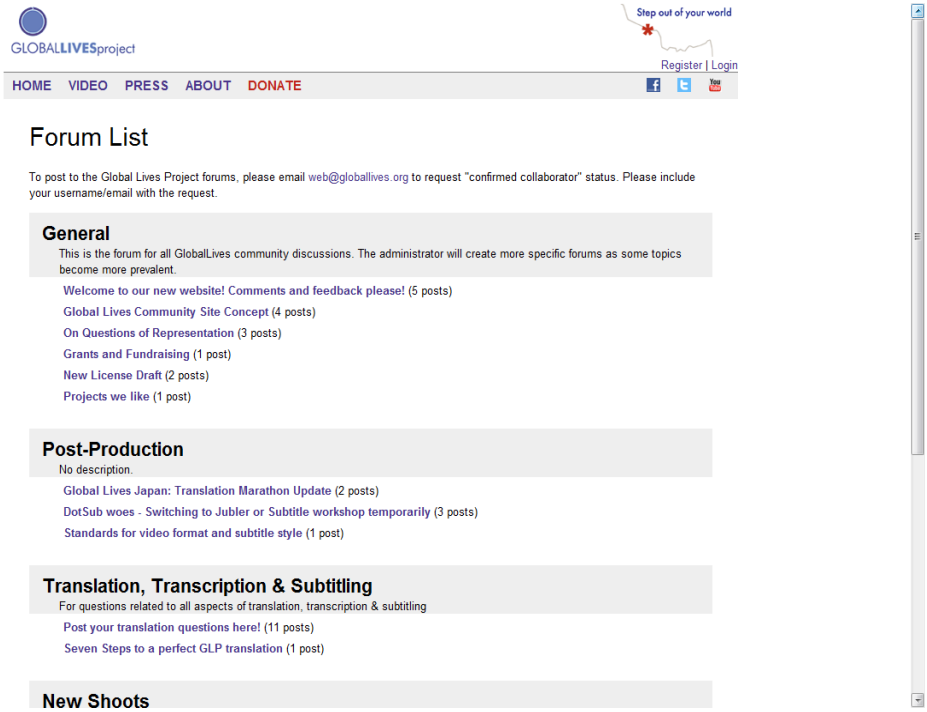

Fig. 44 - *Global Lives*' Forum screen. (http://globallives.org/en/forum/)

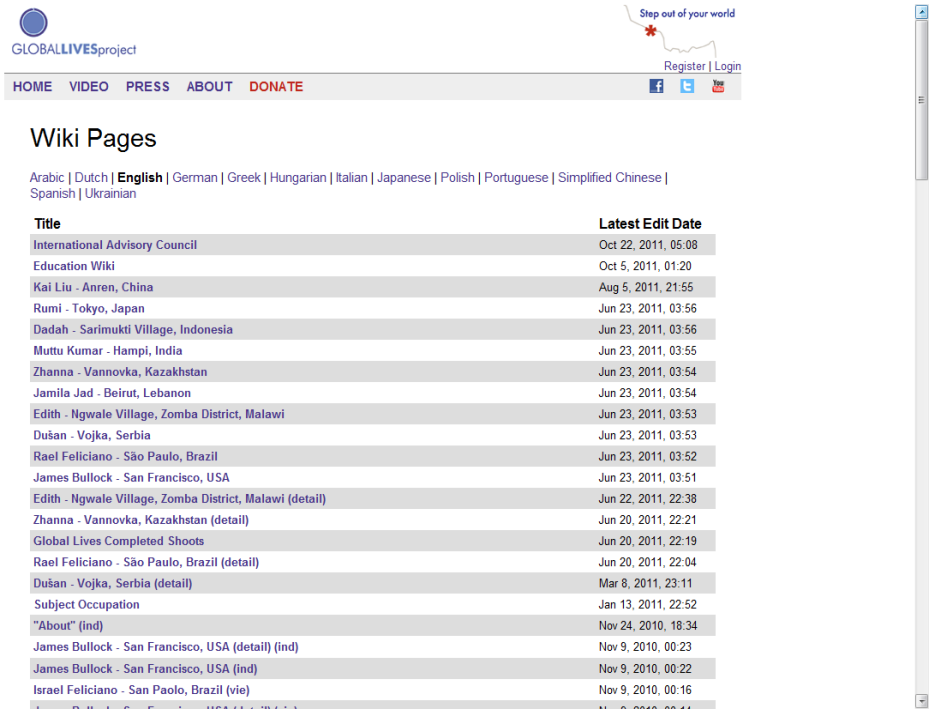

Fig. 45 - *Global Lives'* Wiki Pages screen (http://globallives.org/en/wiki/)

The website as it is at the time of writing is in a transitional shape, as it is meant to be changed soon. In its Strategic View Plan 2011-12 *Global Lives* sets out to raise money to re-design the website to make it more appealing to Web users and to add the functionalities that will make it more interactive. The plan is to upload all the shoots made so far, make them open source, and allow the user to choose several countries, or times, and view the selected shoots at the same time in the same screen. But for now this is still just a plan, and it is subject to change.

Global Lives also exists as a dedicated YouTube channel and as a DVD containing the first ten 24 hours shoots that have been released. While the YouTube channel acts as a marketing tool, the DVD is meant to be used for educational purposes by teachers around the world who want to use the free-to-view material to illustrate economic and cultural diversity in our world.

How should we classify *Global Lives*? As a video exhibition? A growing open source video archive? A future interactive website? A future linear documentary film[75]? Potentially *Global Lives* will grow into all of those forms. For now its main form consists of ten 24 hour long films that are being digitised and that are waiting for funding to become a more complex interactive documentary. As funding comes

[75] Although Harris was never interested in the linear documentary form for *Global Lives*, the collective has expressed the wish to produce a documentary to be broadcast on television. This option is currently being investigated.

in, *Global Lives* adjusts; it tries out new routes and slowly changes shape. This is a project that started in 2004 and that has sustained itself through a growing collective and an increase funding scheme. Unlike to big interactive productions, where design visions are signed up at the beginning of the production according to a pre-determined budget, *Global Lives* grows organically adjusting to its temporary conditions. It grows when it can. It stops when there are no environmental opportunities to grow. It changes forms and platforms when the collective decides that a linear documentary would be a good idea – although the initiator Harris never wanted to have such format. *Global Lives* is in a way an organic interactive documentary in a world of fast production projects. It represents a new production mode – a 'commons based peer-production', as Benkler (2002:8) has called it in *Coases's Penguin, or, Linus and the Nature of the Firm*. This will be analysed in detail later.

So, in such an undetermined and changeable form, can we still assume that there are clear *components*?

For now, it will suffice to say that like any other Living Documentary *Global Lives* has its initiator, its platform, its users and its participants. But, since it is a project in flux, and because of its collaborative governance structure, none of those components are fixed yet – and maybe will never be. Harris is still the charismatic figure that brings the project forward, but he is not the only decision maker. The platform is multiple (Web, exhibition, DVD) and yet none of those forms are definitive. The participants are both the subjects and the producers, and yet, in the future, Web users and exhibition audiences could become part of the collective. David Harris and the *Global Lives'* collective are the ones who hold the project together. If one of the two ceases to exist the project might well stop very quickly.

2. *Global Lives'* organization

As in the previous two case studies, the word "organization" relates to Maturana and Varela's meaning - as '[those] relations that must exist among the components of a system for it to be member of a specific class' (1987:47). *Global Lives* is a participative interactive documentary - a documentary that expects from the user a specific form of inter-action: to influence in one way or another the *processes* of documentary production (Dovey and Rose, forthcoming). In the first part of this

chapter, the "who, when and what" method to distinguish between types of participations in digital artefacts has been proposed. Firstly one should ask "who" is invited to participate. This allows us to make the distinction between *peer-producers* (the participants are peers and work with, or under the direction of an interactive director/author), *crowd-producers* (anybody can help, there is very little entry barrier), and *subject-producer* (it is only the subjects portrayed by the documentary itself that are asked to collaborate). In the case of *Global Lives*, friends of friends were first asked to participate in shoots – which would lead to think that peer-producers were privileged, but in a second phase, through the use of the website, anybody with competences of translator, local guide, Web designer or fund raiser were asked to help. Although those competences are sometimes very specific, the array of skills is large enough to say that at the current stage the project invites *crowd-producers* to be part of its production.

The second question is "at which stage of the production process is such collaboration happening"? Since *Global Lives* is, at the time of writing, a trans-media project (it is at the same time a website, a DVD and a series of exhibitions), but also in transition (toward its next phase), its collaborators are both helping in the immediate (shooting, translating, designing etc..) and shaping its future forms (debating ideas through the forum, asking for a linear form, brainstorming its future Web functionality etc…) depending on their competences and interests. If one agrees with Professor of Law Yochai Benkler that 'human creativity cannot be an on-off switch of suitability for a job' (2002:9), and that 'individuals who have the best information available about their own fit for a task can self-identify for the task' (ibidem), then the crowd-production framework of *Global Lives* allows people to fit in the right place at the right time, creating 'allocation gains' (Benkler, 2002:9) that would not be possible if the project had been produced within a firm framework, where fix people are allocated for the job, within a limited timeframe.

Another advantage of crowd-production is that, as long as there is motivation to participate, a peer-produced project can change through time. The industrial model, that has structured production around the cost of physical capital, cannot freeze such capital for a long period of time. For example an interactive documentary, produced by a broadcaster or an interactive agency, cannot immobilize resources for an open period of time. It needs to be finished within a fixed period because its producers need to move onto something else. On the other hand, *Global Lives* can count on a

string of new and devoted volunteers who, providing they feel motivated by the concept, could potentially support the project for the foreseeable future.

As seen at the beginning of this chapter, the third way to understand modes of participation in an interactive documentary is by asking "what is the participant supposed/allowed to do"?

Here *Global Lives* is particularly interesting as, unlike most interactive documentaries, the levels of participation are multiple and can also go as far as taking structural and strategic decisions. While some people are actively involved in translating existing shots - acting at a production level - others represent the collective on the Board Committee - acting at the concept production level. The Board of Directors 'understands its role as trying to secure the sustainability of the organization, making sure it has the infrastructure that it needs, but the Board also understand that it needs to meet the ideas of the collective'[76], said Harris during a recorded interview. At least one of the ten members of the Board represents the voice of the collective. 'We try to follow the model of the Wikimedia Foundation', said Harris, 'they have 2 or 3 seats reserved for the collective. The big problem for us is that we do not have money - so we have difficulties flying people to the board meetings from all over the world a couple of times a year' (ibidem). The last time *Global Lives* had a budget to fly over people from around the world was in February 2010, at the opening of the Yerba Buena exhibition. This occasion was used to organise a series of brainstorming sessions about the future of *Global Lives* – sessions that included visions for the new Web platform, best practices for the productions of the 24 hours videos, the numbers of new shoots envisaged for the period 2011-13, the need to standardise and encode material, but also new models of governance for *Global Lives*. Interestingly Harris recalls that no one was interested in changing the model of governance. His explanation is that most representative of the collective are video producers and that 'they want to keep filming, not decide about organisational issues. They did not want to change anything' (idibem). Is this model of collaboration failing to involve people that can dispute its basis? Wikipedia comes once again to mind as an example, as the case of its Spanish language

[76] From private recorded interview with David Harris, held via Skype on 15.11.11.

Wikipedia fork[77] proves, that the collective can effectively react in a drastic way when the fundamental principles of people's collaboration have been changed, but that in normal times most collaborators are principally interested in their specific tasks, and not particularly in governing. On the other hand, the possibility given to the collective to propose new routes for *Global Lives,* and to question its existing structure, means that potentially this project does not have a fixed organization. From an autopoietic point of view this means that the conservation of its structure is not central to *Global Lives*, which makes it organizationally open to its environment and therefore in constant evolution.

3. Do changes affect the identity of *Global Lives* and/or the identity of the systems that are related to it?

One of the assumptions in this research is that identity is always relational and interaction is co-constitutive. Following Dovey and Kennedy I have opted for a view of subjectivity that 'challenges the notions of a fixed or stable identity by starting from the idea of an always relational and always situated self' (2007:6). So, if both the user/participant/author's identity and the interactive documentary are relational entities the question becomes: how do those two dynamic systems respond to each other when they are in contact? In other words, how do the 'multiple exchanges between individual-group-machine' create 'complexes of subjectivations' (Guattari, 1995:7)?

The fact that interaction between dynamic systems is co-constitutive (Dubberly, Haque, and Pangaro, 2009) - in the sense that all the entities related through it will change to a certain degree - does not tell us *how* they are going to react. *What* is changing when an individual interacts with *Global Lives* – both at the level of the individual and at the level of the artefact? To respond to this question we can look at the assemblage that emerges from the individual-machine-context coupling. With this methodology each documentary is seen as unique: agency and context are totally case specific. In hypertext documentaries the click of the user is the base of a circular autopoietic relationship (in the *[LoveStoryProject]* the user affects the artefact by choosing one option and the artefact adjusts to those changes by reshaping itself and

[77] In 2002 the perceived expectation that Wikipedia would soon start hosting advertisements led the contributors to the Spanish language Wikipedia to start an independent project: The Enciclopedia Libre Universal en Español (Tkacz, 2011:101).

proposing new choices that cause a re-adjustment of the user's point of view). In experiential documentaries the freedom of movement in physical space puts the user in a 'transitional space' (Massumi, 2002:183) where the environment (the city in the case of *Rider Spoke*), the artefact (*Rider Spoke*'s database) and the user (the biker) adjust to each other. In the case studies chosen in chapter three and four, changes in the identity of both the user and the artefact have been analysed. In the hypertext mode, the changes happen in a world where the user has freedom of exploration and interpretation, but no freedom to take actions that have not been forseen by the author (one can only choose between a set of given options) while in the experiential mode the user has a voice that has political implications, since it can change other people's point of view (at least in the case of *Rider Spoke* which uses a participative logic where people could record their thoughts and be listen by others).

The case of *Global Lives* is different from those previously analysed in this research, for two fundamental reasons:

1. *Global Lives* is not a hypertextual, nor an experiential interactive documentary, but a participative one. This means that the interactivity focuses mainly on the collaboration of its users/participants. Contrary to most participative documentaries, including *Rider Spoke*, the agency of the participant is not only placed at the level of production of content, but also at the level of governance. Potentially this means that the changes that the individual can make in *Global Lives* are not only to expand its database (for example by shooting a new 24 hours film) but also to change what the documentary will look like, and do, in the future. Effectively the Collective Web Committee that met in February 2010 decided the main functionalities that new website will enforce. Founder Harris is not trying to dictate his personal view of the project, but rather to cater for a collective project.

If we then wanted to see how *Global Lives* can provoke changes to its participants (since the hypothesis in this research is that a Living Documentary is to a certain extent in structural coupling with its environment, and therefore changes happen in both directions) one could say that *Global Lives* resingularises (Guattari, 1995:7) its collaborators as filmmakers, translators, fundraisers or exhibition audiences and it also empowers them as concept makers, and therefore as co-authors of *Global Lives*. This was not possible in any other interactive documentary mentioned so far. *Global Live*s is the only project, to my knowledge, that really accepts co-authorship at the

concept level. It shares decision-making at both the levels of interactive structure and content production.

2. *Global Lives* is not finished yet, so one cannot analyse the interaction of the artefact itself, but only the options of actions of the current user/participant. Those options are about self-positioning: does one want to help in translating, fundraising, shooting, deciding, go for more than one of those options, or not helping at all? In the *[LoveStoryProject]* a user could resingularise (Guattari, 2006:7) herself through her hypertext choices, but those were narrative choices, not status options. There is a difference between asking "what do I want to see next" (the *[LoveStoryProject]*), "what do I feel, what do I notice" *(Rider Spoke)* and "who do I want to be" (*Global Lives*). In *Global Lives* you are what you do, which is why Harris calls it a do-ocracy[78]. But the consequences of do-ocracies are both political and economic. Politically it is assumed that the individual should be able to take decisions at any level, while economically it is assumed that self-identification is a viable production model. On this second point Benkler's analysis of peer production systems states that in order to succeed, and overcome the potential issues with incorrect self-assessment, a mechanism of peer control must be put in place (2002: 47). This is effectively happening in *Global Lives* as a Production Committee of the Collective filters all shooting requests. At another level, the Board of Directors has to approve the volunteers that want to represent the collective. This seems to position *Global Lives* as a project that has a chance to succeed in time (more on this will be said in the next sub-chapter).

On a political level, *Global Lives* poses all the problems that other collectively governed projects pose: what is the role of expertise in decision-making? How transparent is such decision model and who are its losers? Is consensus possible in

[78] Do-ocracy is the word employed by Harris during the interview that I had with him on the 15.11.11. This word defines organizational structures in which people can choose roles and tasks for themselves and then execute them. As a model it contrasts with those of meritocracy, democracy and aristocracy, as what it recognized is the ability to do the work rather than been good at it, being elected or being socially apt at doing it. In reality the current structure of *Global Lives* is more a mix of community governance (in the collective) and a traditional representational model (in the Board of Directors), very much like the hybrid structure used by Wikipedia (where consensus decision making is possible within the Community members while a representational logic is applied for the Board of Trustees). I suppose that what Harris wanted to say is not that anybody can do whatever she wants (which would not be true, as *Global Lives* has specific production committees that filter all the propositions made by volunteers) but that people who suggest ideas, which are accepted by the collective, can pursue them in their realization – without handing them out to Harris or to other producers.

the long term and should there be a benevolent dictator? Is meritocracy a better model than do-ocracy? The answers to these questions are outside the scope of this research. What is relevant here is to say that the participant is positioned by *Global Lives* in what Currie and Stegbaur have called an 'emancipation ideology' (2011:342): everybody can participate adding their own knowledge to what effectively becomes a 'global knowledge' (ibidem). This ideology has its limits (can global knowledge ever be reached? Is such model sustainable in time and with the increase of the participants?) but it definitively empowers the participant to a level never reached so far, in the realm of interactive documentary production. The next sub-chapter will question if this model has chances of surviving in the long term and what could put it in peril.

4. What stabilises, destabilises, or ends *Global Lives*?

Regardless of what *Global Lives* will look like in the future, its collaborative nature poses a fundamental question: are peer-production and collective authorship in a documentary context sustainable in the long term?

Since Howard Rehingold's *Smart Mobs: The Next Social Revolution* (2002) and James Surowiecki's *The Wisdom of Crowds* (2004), collective intelligence has been seen as a fresh approach to problem solving by some (Benkler, 2006; Helm, 2005; Sengers, 2007; Shirky, 2008, 2009a, 2009b; Surowiecki, 2004; Tapscott and William, 2008), and as a despicable mediocrisation of knowledge by others (Carr, 2007; Helprin, 2009; Lanier, 2006; Orlowski, 2005). This is a debate that does not help our query as this sub-chapter does not focuses on the quality, nor the correctness, of *Global Lives'* content but only on its chances to survive in the long term. Benkler's approach is, once again, particularly useful as he has tried to determine what conditions are likely to promote the long-term survival of peer-productions. I propose to re-contextualise Benkler's analysis through the *Global Lives* case study in order to assess what can stabilise, destabilise or end *Global Lives*.

In *Coases's Penguin, or, Linux and the Nature of the Firm* (2002) Benkler argues that peer-production can be seen as a third model of production (compared to the firm and the market model), but he also makes clear that such model is not always suitable and that it needs a certain number of conditions to be fulfilled if it is to function effectively.

> The traditional objections to the commons are primarily twofold. First, no one will invest in a project if they cannot appropriate its benefits. That is, motivation will lack. Second, no one has the power to organize collaboration in the use of the resource. That is, organization will lack and collaboration will fail. (Benkler, 2002:10)

Let us start by the motivation issue: why do people devote their free time to *Global Lives*? Above all, as Benkler says (referring to Learner and Tirole), 'there is the pleasure of creation' and 'the pleasure of giving' (2002:58). Monetary and self-recognition incentives are often also at stake, but they are maybe less important in this kind of project: most of the work, to date, has been done for free[79] and the collective is composed of a very heterogeneous crowd (which diminishes peer recognition opportunities). In some case the motive might be the gaining of experience to find work in the future, although this would hardly justify the time spent by a participant in the project. Other motivations, such as 'social-psychological rewards' (Benkler, 2002:59), peer recognition and status perception, could be marginally influential but they are probably less relevant than in the hackers world (unlike coders, filmmakers and translators do not take pleasure in "cracking" a line of code more efficiently or more elegantly than their peers). A filmmaker wants to "be there" and meet the people she is portraying, and a translator wants to make a script accessible to others. There is less competition than in the coders' world and therefore less peer recognition to be gained. Furthermore, as said earlier, the collective is so diverse in background that peer-recognition would be difficult. So, if the incentive is neither money nor status, then what is it?

Narrowing down motivation to money and self-esteem is a little simplistic. The 'pleasure of creation' and 'the pleasure of giving' (Benkler, 2002:58) are probably dominant in a project such as *Global Lives,* but we might suggest that a few other factors could also be at the basis of people's commitment:

- Free time seems to be key. A look at the people involved in *Global Lives'* website indicates a majority of people under the age of thirty. One can easily understand why young researchers, producers, or non-profit sector adepts, could be interested in dedicating their free time to a project such as *Global Lives*.

[79] Till December 2011 founder Harris has been working part time on *Global Lives*, and has been paid minimal wages. One full time staff has been employed to do administrative tasks and one Program Coordinator is to be hired in January 2012.

- Personal beliefs and political interests are also clearly important. Seven out of the nine people who make up the *Global Lives* Board of Directors have previously worked in the non-profit sector or are studying issues related to globalization, social inequality and rural development.
- The pleasure of being involved in a bonding group activity should not to be underestimated. Translators are often friends of people that have been filmed, filmmakers tend to use the same crew members in different shoots and friends of friends are happier to collaborate than total strangers.

Once people dedicate a substantial amount of their time to *Global Lives* they develop a sense of ownership of the project. "When you spend a year of your life translating videos that other people have done you feel a real feeling of ownership of it" said founder Harris during our interview. Behind such feeling of ownership one might want to see a deeper need of belonging and personal coherence. In his article *Wikipedia and Authority* (2011) Mathieu O'Neil states that 'what participants in peer-production projects such as Wikipedia seek, first and foremost, is a feeling of unity between their identities as consumers and producers, between their activities of work and play, ultimately between themselves and the project' (2011:321).

As contemporary society still bases its legitimacy on the authority of experts, *Global Lives*, like many other crowd-produced digital projects, wants to prove that popular representation is possible and that financial stakes are not the only way to justify decision-making and personal motivation. Clearly there are no unique solutions, there are only attempts to find new routes. In the realm of interactive documentary *Global Lives* seems to be the only example that has survived and prospered for seven years following a 'collectivist organization' (O'Neil, 2011:312) logic[80]. This could indicate that collective leadership, peer-production and co-authorship are possible in the cultural production of documentaries.

[80] The other project that tried to empower a collective of participants to edit an online documentary was the *Echo Chamber Project* (2002-2007) by Kent Bye. This project mysteriously stopped in 2007 just after having received some funding. Without knowing the reasons for such abrupt disappearance I can only guess an explanation that would be in tune with Benkler's approach. Effectively the *Echo Chamber Project* did not have any regulation and quality control – in the sense that anybody could collaborate and that there was no clear governance structure to regulate the quality of the contributions. According to Benkler (2002) the lack of regulation and quality control disrupts the integration of the project – making it unsustainable in the long term.

And yet, possible lack of motivation and organization over time seem to be the weak points of this collaborative production model. Although one cannot forecast how long the participants in *Global Lives* will maintain their motivation, one can only assume that its constant collective growth in the last seven years is indicative of enough community interest for it to keep going in the short term.

Finally, assessing *Global Lives*' potential halt, or death, means assessing its chances to succeed in the long term. As we will see next, *Global Lives* chances of survival are directly linked to the adaptability of its system of governance – because this too will need to adapt to its changing forms. *Global Lives*' model of governance is closely modelled on that of the Wikimedia Foundation. While a collective of participants can deal with the day to day questions through forums and Basecamp posts, a Board of Directors makes sure the organisation fulfils its mission and looks at fundraising, organisation and staff. This mission is similar to Wikimedia's Foundation, with the difference that Wikipedia went through four stages of governance since its birth in 2000 and the current mixed model (consensus decision making at the collective level and a more traditional representational model at the Board of Trustees level[81]) is the result of an evolution in time motivated by an augmenting number of collaborators, and the need of guaranteeing a certain content quality control. It is probably naïve to assume that because this model works well for the Wikipedia, that it will work just as well when applied unchanged to *Global Lives.* First and foremost their goal, timing and content are different. *Global Lives* is fundamentally based on video material, rather than words, and it is a project at its early stages of development, while Wikipedia can be considered a more mature project. This said, one of the significant lessons learned by Wikipedia is that its hybrid structure[82] gives it a higher ability to scale and survive over time. Having compared 50 cases of collective communities, Fuster Morell concluded that when the community of doers and the governance are fused in a common system, the group is less capable of scaling and the ratio of death over time is higher (2011:338)[83]. On

[81] See Mayo Fuster Morell's historical overview of Wikipedia's infrastructure in *The Wikimedia Foundation and the Governance of Wikipedia's Infrastructure* in Critical Point of View: a Wikipedia Reader (2011).

[82] Hybrid in the sense that the Wikipedia community and the Wikimedia Foundation follow different models of governance.

[83] Here Fuster Morell's particularly refers to 'self-provision models' where the community is also involved in everything, including infrastructure provision. This model seems to be 'ill-adapted to the proper organization of the infrastructure' (2011:338).

this basis we might expect that, by adopting a hybrid structure, *Global Lives* maximises its chances to scale up to its new developments. This assumption will be quickly tested as *Global Lives* is going through its first major growth spurt. In the Strategic plan for the years 2011-13 *Global Lives* plans to hire a full time Production Coordinator, have a full time Executive Director and hire a Web and a development contractor. The Production Coordinator, quoting from its online job description[84], 'will be critical to the growth and expansion of the Global Lives Project as we make the transition from a project-based effort to a sustainable institution'[85].

Ultimately what will stabilise, destabilize or kill *Global Lives* is its ability to embrace the advantages of peer-production and avoid its weaknesses. In order to flourish, *Global Lives* must keep motivation high and have a flexible model of governance that will adjust in time to its production needs. If the participants' tasks become too big, or too complex for its collective, *Global Lives* might have to change its production model. Another threat could be the diminution of collaborators – which could lead to gradual decline. On the other hand, if *Global Lives* manages to balance motivation and organization, in such a way that identification and allocation of human creativity is at its best, it might prove that peer-production and a certain level of co-authoring are possible in interactive documentary.

Finally, a minimum level of funding needs to be guaranteed. At the moment Harris is confident that the rapid increase of grants and funding he has witnessed throughout the years is a sign that *Global Lives* will keep growing.

> There are plenty of organizations, from Greenpeace to Wikipedia that have survived through the years purely on donations. We do not have a fee or a product but we generate money from three different sources: donations from individuals, sponsorship from foundations, we sell some DVDs and we also have exhibit commissions. We do events to fundraise for the project. I think that throwing out parties is actually doing pretty well. It is not a traditional business model but it is a workable model. (Harris, interview, 15.11.11)

One last question arises: even if *Global Lives* grows and evolves, does it need a large number of participants/users to ensure its self-making?

If a peer-produced project has the environmental conditions to be self-sufficient in its ecosystem, its metrics of aliveness have nothing to do with infinite growth, numbers

[84] The position for Production Coordinator has actually been advertised on Global Lives website on the 14.12.11 and can be seen at http://www.globallives.org/en/nowhiring/. Retrieved 15.12.11.
[85] Source: http://www.globallives.org/en/nowhiring/. Retrieved 15.12.11.

of clicks or growing interest from others (the so called users or audience). Audience size, which is so significant in commercial television and in the film industry, is less relevant in a non-profit project. It could be argued that a growing number of participants are actually a problem for the stability of the project – as growing collectives, Wikipedia teaches us, poses potential problems of governance, quality control and forking. The fascinating aspect of peer-produced projects is that, once they have found a balance that works for them, they can adjust to their ecosystem with relatively small adjustments.

If, through *Global Lives*, participants manage to "fit in", finding their place in a structure that empowers their capabilities and gives space to their potential, then – regardless of its interactive narrative structure, and of the numbers of its users clicks – it will make a political statement. It will prove that participative projects that count on peer-producers, crowd-producers, subject-producers and co-authors are substantially politically different. Although all participative projects allow their collaborators a certain agency, those who allow peer-producers to become co-authors create, rather than represent, a world where the individual is not just asked to perform a task, but is free to choose where to fit in. The collaborator in such project is not just helping to document an external reality or a world imagined by others: she has now the power to decide the position she wants in the world, and also the power to express her vision of reality.

Summary

This chapter questioned the strategies, and the implications, of user collaboration in participative interactive documentaries. The *participative mode* expects a specific type of inter-action from the user: to influence the *processes* of documentary production in one way or another (Dovey and Rose, forthcoming). In order to elucidate this definition, specific attention was given to the meanings of "influence" and "processes of documentary production". This chapter started by questioning what User Generated Content (UGC) is, where the term comes from, and what the implications are of such forms of collaboration in the context of interactive documentary praxis. We saw that UGC is just one way to participate in an interactive

documentary, and that a variety of other options are possible, and are being explored (for example by Katerina Cizek and David Harris).

We showed that depending on the type of collaboration demanded (user-testing ideas, crowdsourcing research material and content, commenting, editing existing footage, translating subtitles etc…), "who" is invited to participate (the people being portrayed in the documentary or the audience/users) and the phase that is influenced by such participation (pre-production, production and/or post-production) the participative documentary acquires a different form. From this we saw that here is no such thing as a typical or standard, participative documentary – there are logics and levels of participation that can be used in documentary production. What all those documentaries have in common is the more or less implicit importance given to the user-participant, and therefore the political assumption that the individual has a role to play in constructing her reality. How far can this go, and what role is given to the individual, was the subject of the second part of the chapter.

To place participative documentaries within the larger context of collaborative culture, an historical overview of the open source movement was given. This allowed us to trace back the ideology behind peer-reviewing, free software, and gift economy. From this overview, we saw that the tendency to equate source code in software to video rushes in documentaries[86] is not particularly rigorous. This parallel is particularly misleading when it is drawn by people who have been inspired by the Wikipedia model of collaboration but have not analysed it rigorously. We argued that, for the parallel to work, we would have to take into account every aspect of the way Wikipedia functions: its open source software, its User Generated Content, its collaborative editing structure, its governance structure and the semantic nature of an encyclopaedia's entry.

Dancing to Architecture (2002) made its rushes available online, and released its film under the Creative Commons, but the film was still edited by professionals, with no need of collective governance. Here the use of Wikipedia's open source model stopped at the availability of rushes (seen as parallel to words in an entry) distributed on the Net. In *RiP: A Remix Manifesto* (2004), Brett Gaylor tried to go one step further and included Internet users in the creation and editing of rushes. This worked

[86] This parallel was first made in 2002 by *Dancing to Architecture*'s directors Leroy Black and Kristefan Minski, but this chapter argues that most participative authors are still influenced by such misleading association.

only to a certain extent, because only few dedicated peers really helped in the process and Gaylor, to all extents and purposes, edited his film on his own. Wikipedia's crowdsourcing logic seems to be difficult to sustain once applied to documentary production, and one reason might be that the notion of the "author-filmmaker" is difficult to share. It was argued that equating rushes with software is generally inappropriate. Editing aesthetics are concerned with the subjective expression of an author, while the quality of software is concerned with making a program run efficiently. Also, hacker and filmmaker production praxes are different: for big projects, such as operating systems or Internet browsers, hackers generally write and de-bug collectively, while in film production many roles might be needed but editing and filming are generally given to one person who, in conjunction with the director, has final control over the shape of the film.

This chapter then challenged a second simplistic assumption: that participation is equal to User Generated Content (UGC). It was argued that UGC influences the database of the documentary, but not its form. In the last five years, a variety of documentary projects have experimented ways of involving users in content production: *The Johnny Cash Project*, *Mapping Main Street*, *6 Billion Others*, *Man with a Movie Camera: Global Remake*, *Life in a Day*, *One Day on Earth* etc… are all projects that ask users to participate by adding photos, audio, text or video content. What those projects do not do is to extend collaboration to levels of collective governance that could change the interactive framework that defines the project itself. The political consequence of such emphasis on UGC is the assumption that the individual has a voice but should not have control on how it is used. It was claimed that using content sent by people that have no control on how such material is finally used, like in the case of *One Day on Earth*, is potentially antithetic to the rhetoric of openness and democratic expression behind the participative culture movement.

We saw that the part played by the participant is not neutral, it is actually crucial. Splitting the control of who makes the framework and who makes the content has political repercussions, as it divides roles, areas of influences and, de facto, creates power relations. In order to concentrate on such power relations, it was suggested to step aside from the association "participation equal User Generated Content" and to adopt a wider understanding of collaboration as having *levels of control* on different parts of the production process of an interactive documentary. It was therefore

suggested to analyse strategies of collaborations through three main questions: *Who* is invited to collaborate? *When* is this collaboration happening? And *what* is the participant allowed/empowered to do? Through these questions an array of examples were analysed to frame the complexity of the participative genre. It became clear that documentaries such as *Life in a Day, 6 Billion Others and One day in Earth* - what Mandy Rose has called "life on earth"[87] documentaries - do allow *distributed-production* but no *distributed-authorship*, as *crowd-producers* are responsible to populate the database of the artefact but have no impact in shaping the interactive form of the documentary. On the other hand, documentaries such as *Out My Window* and a *Thousand Tower*, that place interactivity on the subjects that are portrayed, give to such *subject-producers* a real opportunity for change in their private lives. These possibilities for change are paradoxically framed within a type of documentary that is totally authored by director Katerina Cizek. In these examples, the power of transformation is given to the subjects, not to the users.

What emerged by using the *who, what and when* framework, is the realisation that what Dovey and Rose have called *distributed-authorsip* (Dovey and Rose, forthcoming) in interactive documentaries is still very much a myth – especially if by authorship one understands participation in both content production and the interactive concept of the documentary. It might be that the only documentary that challenges the notion of authorship in interactive documentaries, by experimenting with collaborative governance, is *Global Lives*. This project, initiated by David Evan Harris in 2004, was taken as main case study of participatory documentary because it attempts to push collaboration as far as possible, mixing peer-producers with subject-producers, content-generation with collective governance.

As in the previous two chapters, the analysis of the main case study was done by using the Living Documentary approach - which questions the components and internal organization of the artefact, its relations with external systems, including people, and looks for what stabilises, or destabilizes it. The case of *Global Lives* is particularly complex because it is a project still in development, and we cannot foresee with any certainty what its final shape will be for the user. For this reason, the analysis concentrated more on *Global Lives* potentialities than on its actual working structure. *Global Lives'* mixed collective governance - with its Board of

[87] See Rose's post of the 7th of July 2010 in her blog http://collabdocs.wordpress.com, retrieved 3.10.11.

Directors, and its collective that feeds into strategic decisions - was seen as a central force that determines its possible future evolution. From an autopoietic point of view, *Global Lives* can be considered as an entity without a fix organization and is therefore fundamentally open to its environment. From an economical point of view, it can be seen as a potentially successful example of cultural 'commons based peer-production' (Benkler, 2002:8). Benkler's notion of 'commons based peer-production' model (2002:8), as a third alternative to the firm and the market production model, was highly used to test *Global Lives* chances to adapt and grow in the future. If *Global Lives* has on its side the possible benefits of 'allocation gains' (Benkler, 2002:9) that would not be possible in other models – if we can assume that individuals are the best judges of which niche is the right one for their particular creativity and skills sets – it also faces considerable risks: collaborators' motivation could drop over time, its system of governance might not be flexible enough to adapt to the next stage, and the granularity of its modules of production could be too large to spread the workload among its collective of volunteers. On the other hand, if *Global Lives* manages to survive and grow through time, it will clarify two points:

1- On a production level, it will prove that it is possible to have a participative documentary that opens *all* its production process to collaborations.

2- On a political level, it will prove that it possible for individuals to choose what they want to accomplish, express themselves and finally shape the environment in which they act.

Although all participative projects allow a certain agency to their collaborators, those which allow peer-producers to become co-authors, create, rather than represent, a world where the individual is not just asked to perform a task, but is free to choose where to fit in, and what to build. The collaborator in such project is not just helping to document an external reality, or a world imagined by others, but rather she is part of a process where her actions are as influential in forging her own position in the world as in shaping a co-created reality.

Conclusion

Part of my motivation for undertaking this research was to discover what type of digital documentary I wanted to produce next. As often happens when one tries to clarify the intangible, things got a little more complicated than planned. If my vision of what an interactive documentary is, or is not, is definitely clearer now than when I started this work, my quest for a preferred genre of interactive documentary has proved fruitless. By defining modes of interactivities, and analysing cases studies for each of them, I have realized that the strength of interactive documentaries is to position us within the reality that they want to portray, giving us a social and political role that we then have to negotiate by ourselves. The quest for a perfect genre is therefore irrelevant since each interactive mode offers a vision of the world that is different and case-specific.

By choosing to look at interactive documentaries as relational objects, a new dimension was made visible: co-emergence of reality. If we are part of an interlinked object, each of our decisions destabilizes, and repositions the other linked entities/components. We are not detached and objective observers but engaged, and therefore responsible, interactors within the interactive documentary itself. Deciding the role we might want to play/create/explore now becomes crucial because - depending on the interactive mode we are participating in - we affect reality, ourselves, and the documentary itself. Perhaps the most significant finding lies in differentiating between the types of transformative effects afforded by each interactive documentary. This research, with its proposed methodology, is therefore a first step in exploring the multiple ways in which we participate, shape and are shaped by interactive documentaries.

The first task of this work has been to define what we mean by interactive documentaries. My proposed definition has deliberately been platform and topic agnostic in order to stay open to future developments and to be as inclusive as possible: any project that starts with an intention to document the real, and that does so by using digital interactive technology, can be considered an interactive documentary. An interactive documentary is not just a linear documentary produced with digital media as it has to give some agency to the user (which means that there

is more than the act of interpretation). The user/interactor physically affects the interactive documentary. The user is not the receiver of an organised narrative coming from a filmmaker, but is an active player in an interactive narrative/experience facilitated by the digital author. An interactive documentary might not use video, or audio, at all: it can use live data, have a game logic, be a locative project or even be an interactive physical installation. It is the fact of documenting *through interactivity* that makes the interactive documentary fundamentally different from a linear one - because it places the user within a certain number of technological/physical/cultural constraints that afford change through feed-back dynamics. What can be done? By whom, when and how? At each step of this dynamic exchange transformations are produced and co-emergence occurs. The next question is therefore to understand if there are typologies of change within interactive documentaries.

I have argued in this research that, until now, four main modes of interactivity have been used in interactive documentaries: hypertext, conversational, experiential and participatory. Those modes come from different visions of what the human-computer relation might be. In chapter one, the history of those modes is explained and early examples of interactive documentaries following this kind of logics are given.

The second aim of this research was to propose a possible taxonomy of the field. I have chosen to look at modes of interactivity as the core essence of interactive documentaries: what is the inherent logic that makes them "work", and how does this interactive dynamic re-position their components? The hypothesis here is that depending on the mode of interactivity chosen (and there can be more than one in the same artefact) a certain world is depicted; a world that has rules (what can and cannot be done), where users have a role (political positioning), levels of freedom (that they can stretch, act against or accept) and in which they define themselves through their actions (subjectivation) and understand their environment (enacted cognition). The advantage of using modes of interactivities as differentiators for a taxonomy of interactive documentaries is that it allows us to see beyond the topic of the documentary, and beyond its support platform. Modes of interactivities do not look at what the documentary says but at what it does to us and to itself.

Interactivity is therefore seen in this research as more than a simple action-reaction, human-machine process. Instead, I suggest that it be considered as a transformative force with autopoietic behaviours that creates infinite dynamic links between all the

entities that are related to it and to each other. In this light, the interactive documentary becomes a *relational object* that has a life in itself. In chapter two, I have called such complex autopoietic assemblage a *Living Documentary*, an entity that has its organization, that is more or less open to change, that can affect the identity of the systems that are related to it and that can eventually stop functioning/existing. In order to see the behavioural changes and the internal organization of such entity, I proposed in chapter two that we consider the Living Documentary as an artefact made of heterogeneous *components* (material, cultural, digital and technical) linked through infinite *dimension*. If we follow this methodology, there is no "right or wrong" way of analysing a documentary: there are only ways of looking at it, depending of what one is looking for. The intentionality of the author, the aesthetics, the user experience – which are often recurrent keys when analysing digital artefacts – become possible dimensions of analysis, amongst others. Furthermore, this methodology allows us to see multiple connections between elements so that, for example, "the platform" can be seen as influencing not only the interface, but also the plot, the code, the role of the user – and *vice versa*. In order to explore the autopoietical behaviour of interactive documentaries, I have used four main questions that were then applied to specific case studies in chapter three, four and five.

1. What are the main components and dimensions of a particular Living Documentary?
2. What is its organization and can it change or evolve?
3. Do such changes affect the Living Documentary's identity, and/or the identity of the systems that are related to it?
4. What stabilises it or destabilises it, and what would cause a Living Documentary to halt or die?

I have used these questions to study the *[LoveStoryProject]* (2002-2007) for the hypertext mode, *Rider Spoke* (2007) for the experiential mode and *Global Lives* (2009-ongoing) for the participatory mode, and have reached the conclusion that if all Living Documentaries have autopoietic behaviours they differ in levels of openness to change and their transformational power is of a different nature. The main findings of this research, organised by modes of interactivity, are as follows:

1. The conversational mode

As defined in this research, conversational interactive documentaries are based on a type of interactivity that simulates a seamless conversation between the user and the computer. The user is free to improvise movement/decisions at any moment and the software has to respond smoothly to such decisions. The positioning of the user is as equal to the machine and the assumption is that an artefact created with this kind of logic of interaction can simulate reality, normally through a 3D world. An early example of this mode, seen in chapter one, is the *Aspen Moviemap* (1980), but 3D games such as *America's Army* (2002), *JFK Reloaded* (2004) and Second Life's *Gone Gitmo* (2007) are more recent examples - where gameplay is organized around strictly documented facts.

In a conversational documentary, decisions about movement and action seem limitless to the user/player/interactor. Although the user is exploring a narrative that requires certain decision-making in order to move to the next level of the story, these options are not clearly flagged in the interface. The interface affords a freedom that is not possible in the hypertext mode where the interface is more static. In the conversational mode the users have to feel free to explore and to find the possible routes by themselves. First they need to explore a world that has rules of which they are unaware and then they have to make choices based on what they have discovered and hypothesized (without the certainty that those are the only options available). The world represented by conversational documentaries is a rule-based world that needs user agency to be mastered. It is through freedom of exploration that the user will be able to forge a personal point of view and then act. Contrary to the hypertext mode, formulating choice is as important as choosing, and exploration of space is part of the learning process. Playing in a virtual space becomes an opportunity for personal growth because 'in play we have the license to explore, both ourselves and our society' (Silverstone 1999:64). But play also becomes constitutive of creation of cultural meaning: 'in play we investigate culture, but we also create it' (ibidem).

The author of a conversational documentary decides the rules on which this world will be based, what "can be done" by the user, the limits of their agency and the goal

of the journey. In other words, the author is a God-like figure who may not know what will happen but who determines the conditions of action. Power relations can however differ: when the world can also be generated by the users (configurative function), the author becomes a facilitator and an initiator. When the world can only be explored and acted upon (role-play function), the author is a narrator. The conversational mode therefore places a role-player (the user) in a digitally simulated, or re-enacted, reality and creates scenarios that constantly ask the player/user to take a position. Here reality is not objective and determined, as it is composed of an apparently limitless number of scenarios. More importantly, this reality needs to be explored and interacted with before it can be understood. An enacted and situated view of perception is therefore proposed, where manipulation of technology, action and time are all essential to the creation of meaning.

The autopoietic behaviour of conversational documentaries has not been explored in this research, as no in-depth case study has been analysed, but it is probably safe to assume that they are relatively similar to the autopoietic behaviour of experiential documentaries (where a physical world, rather than a digital one is the place of action of the documentary). To which level the unpredictability of our physical world, and our embodied perception of it, adds layers of complexity to experiential documentaries (a complexity that conversational documentaries cannot achieve yet because of the limited variables in 3D worlds) would need further investigation in a future research.

Compared to other interactive modes, the conversational mode is particularly effective when placing participants in front of hypothetical ethical choices, or situations, that they might never encounter in their lives. The simulative nature of 3D environments affords 'modelling complex environments with multiple interconnected causalities' (Dovey and Kennedy, 2006:11) making "playing" a moment where individuals can freely explore their personality without having to live through the real life consequences of their game choices. Though this poses several ethical questions, and opens new areas of debate, it nevertheless shows that simulation has an important role to play in the understanding and creation of our subjective reality. The resistances of documentary makers, to using simulation rather than representation as a documentary mode, might need to be challenged. Through conversational documentaries, re-enactment can find a valuable place in documentary making by pushing forward the idea that facts are maybe as important

as ‘experiencing facts’ (Nonny de la Peña, 2011). If we accept the hypothesis formulated in chapter one, that the aim of interactive documentaries is no longer to express a single point of view but rather to establish a mediation between different parts of society on a specific factual topic, then re-enactment and simulation emerge as powerful tools to experience multiple realities that belong to parts of society that might not always be in dialogue with each other.

2. The hypertext mode

Hypertext interactive documentaries are artefacts based on the exploration of a closed video, and/or audio, archive where the user has an exploratory role, normally enacted by clicking on pre-determined options (often organized in a branching narrative structure). The user can browse through the content but cannot add to it. Early examples, seen in this thesis, are MIT’s *Moss Landing* (1989) and Chris Marker’s *Immemory* (1997) but a multitude of projects using this same logic of “click here and go there” are currently being produced for the Web (they are often referred to as web-docs). *Inside The Haiti Earthquake* (2011), *Out My Window* (2010), *Journey to the End of The End of Coal* (2009) and *Forgotten Flags* (2007) are just a few examples of this style of interactive documentary.

In chapter one it was pointed out that in this mode, compared to the conversational one, reality is no longer a co-creation that happens through mutual conversation between the user and the author via the media but rather a set of possibilities where the user is an explorer. This mode seems to depict a deterministic view of the world where our choices are never completely ours and where the best we can do is to select between options given to us by others. And yet, this reading of hypertext documentaries seems to clash with the view that interactive authors such as Florian Thalhofer have of this genre. For Thalhofer, hypertext documentaries (especially when compared to linear ones) are all about showing possibilities and points of view, and leaving the users the power to decide for themselves. The in-depth analysis in chapter three of one of Thalhofer’s Korsakow documentaries, the *[LoveStoryProject]* (2002-2007) refines my position: if indeed the choices given to the user are coming from the digital artefact, at each click both the user and the documentary co-emerge and re-constitute themselves (autopoietic behaviour). During this rhythmic encounter, where the user chooses and the algorithm re-calculates new options, they

both shift identities resingularising themselves: the user might become "the one who has clicked on the Muslim woman rather than the handsome guy" while the documentary has re-materialized as a new set of possibilities that were not present in the previous screen. The political position of the individual is in making the cut possible, in taking a position in the world and in making sense of it. The user also has a final power: she can stop interacting with the *[LoveStoryProject]* and, de facto, terminating the Living Documentary's temporary life. This final act requests a search for desire, as the interactor has to ponder how much they care about the *[LoveStoryProject]* and how much time and effort they want to dedicate to this relationship. Politically the *[LoveStoryProject]* asks participants to find their desires and beliefs, more than their active voices. This is a world where desire, learning and interpretation are more important than action; where finding where one stands is more important than changing the world - which might explain why hypertext documentaries are so prevalent, and successful, in the educational realm.

While a high level of agency seems to be essential in conversational, experiential and participatory documentaries, in hypertext documentaries what counts is more the presence of an interesting narrative, or of a compelling topic, that can be explored by the user. If the motivation to explore the database derives from the user's personal interest in the topic, a low level of agency might be perfectly justified, especially if it simplifies the journey for the interactor allowing them to concentrate on the content more than on the navigation itself.

Hypertext documentaries have what we have defined as a low level of interactivity and, compared to others, a low level of autopoietical behaviour (in the sense that although they re-materialize themselves at each screen, their transformational power is low: the user, or the machine, cannot add or change the content/database). And yet, through their branching structures and their strong narrative feel, they depict a world that emerges afresh at each of the user's steps. The others, those outside of the project, are not allowed to interfere and create chaos in what is a private journey of discovery, and self-discovery, in a determined world. Hypertext documentaries might be the perfect tool of exploration/reflection/discovery for those willing to be lead, or lead others, through a world with multiple points of view but with limited complexity and margin for individual action.

3. The experiential mode

Experiential interactive documentaries place the user's interaction in physical space - therefore "on location" and outside of the screen space (which is why they are often referred to as locative documentaries). They use mobile devices, such as mobile phones and tablets and GPS positioning, to allow the user to move in physical space and retrieve/create content that is location-specific. Experiential documentaries have really only appeared since the year 2000, once GPS technology and mobile phones reached high levels of penetration. As seen in chapter one, early examples of such mode are *34 North 118 West* (2003) and *MIT in Pocket* (2003). *Greenwich Emotional Map (2005-6)* and *Heygate Lives* (2010) have been discussed in chapter four, and *Rider Spoke* (2007) has been selected as main case study for this mode.

Through in-depth analysis of this mode it was concluded that the main strength of experiential documentaries is in re-negotiating our relationship with, and our understanding of, space. When interactive computation mediates the relationship of the user with a physical environment it creates a *dynamic space* (Massumi, 2002:183) that we referred to as a space of transformation. Compared to other types of interactive modes, the experiential one has the peculiarity of adding layers of data (other's memories, photos of the past, graphics, sounds, comments, confessions etc…) to physical space, creating a complex and dynamic context that I have called an *affected space* in chapter four.

Consciously referring to theories of affect (Massumi, 2002; Deleuze 1978, 1988; James, 1912) what I have called *affected experience* is much larger than the mere felt experience of the senses: it assumes the co-existence, and the relationality, between physical, energetic, mental and potential entities. This can only happen in a space that is not static and geometrical; it needs a space that includes time and that affords transformation. The analysis of *Rider Spoke* showed that the space where the bicycle ride happens is not a Euclidian space, where what matters is the participant's move from A to B, but rather a topological space where, during such ride, a qualitative transformation happens. While cycling through London, a "new" city emerges. This city has not changed position, its buildings have not moved, but it is now qualitatively "larger" as it is now enriched by a specific situated knowledge of "cobbled streets", "other people's glances", "echoes" of other participants, "personal memories" and "new thoughts".

The participant, the city and *Rider Spoke* are all affected and transformed by the dynamic dance that mixes layers of times (recorder memories), movement (of the bicycle/rider), unforeseeable events (traffic jam, encounters, weather changes), emotions (recorded confessions of others) and intangible forces (Hertzian waves, cultural constructions, moods). It is this multi-directional transformative effect of the experiential documentary that I see as characteristic of this form and that makes it potentially a highly autopoietic mode.

The emphasis on body movement and real-time decisions in a constantly changing and unpredictable environment (physical space is one of the interfaces of the experiential documentary but it is not "designable" or "controllable" by the author) makes the construction of meaning the result of an *embodied interaction* (Dourish, 2001:126). The idea of *documenting* a place in locative documentaries assumes that physical engagement is a catalyst for a different type of meaning, a meaning that would be different if the participant was to sit in front of a screen. If the user is always an interactor, a doer, in interactive documentaries, the experiential mode pushes the user to act upon her own living environment, rather than a contained digital world, or interface. The political implication of experiential documentaries is to potentially re-empower the individual in their daily environment (de Certau, 1984). When a participative dynamic is also embraced, as in *Rider Spoke* where participants record their own situated thoughts and make them available to others, the empowerment of the individual has a social impact, as it creates networks of shared experiences (Castells, 1996). Participants in *Rider Spoke* are free to take actions during the ride and are also asked to make a promise to themselves at the end of it. This promise is available to other participants, making it a public statement within the social group of reference. Playing with our social/private responsibility is an important strength of experiential documentaries as they have the faculty to destabilize our understanding of a world we thought we knew, showing us multiple facets that need "the other" to be seen.

Unlike the hypertext mode, where the user has freedom of exploration and interpretation but no freedom of action, here the human being is responsible for their own thoughts and actions. In projects such as *Rider Spoke,* each individual voice has a political and social implication - as it influences the point of view of others – but only individuals can act on their own lives (for example making a promise to themselves). On the other hand all participants share, and create, a space that is

populated by their public points of view. This space becomes multiple, extendable and co-emergent.

4. The participatory mode

As we saw in chapter one, the participatory mode of interactive documentary expects a specific form of interaction from the user: to influence, in one way or another, the '*processes* of documentary production' (Dovey and Rose, forthcoming). Depending on the type of collaboration demanded (user-testing ideas, crowdsourcing research material and content, commenting, editing existing footage, translating subtitles etc…), who is invited to participate (the people being portrayed in the documentary or the audience/users) and depending on the phase that is influenced by such participation (pre-production, production and/or post-production), the participative documentary acquires a different form. There is no such thing as a typical or standard, participatory documentary – there are only kinds and levels of participation that can be used in documentary production – but in most cases the participation has the effect of changing the original database/content, making this form potentially more transformative of the artefact itself than other forms.

In chapter one, we saw Davenport and Murtaugh's 'evolving documentary' (1995: 6) as a pioneer of this mode, but a multitude of examples in chapter five revealed how much this mode has grown in the last ten years - in importance and styles - with the massive use of social and networked media. Projects such as *RiP: A Remix Manifesto* (2004), *6 Billion Others* (2003-ongoing), *The Johnny Cash Project* (2010-ongoing), *Mapping Main Street* (2009-ongoing), *The Thousandth Tower* (2010), *Life in a Day* (2010) and *Global Lives* (2009-ongoing) all use the Internet to involve their users/participants. And yet, the act of collaboration that makes them participatory projects differs in scale and level of skills required. The radical difference in aesthetics, political and cultural impact between those projects led me to propose a methodology to distinguish within participatory documentaries. In chapter five, the strategies of collaboration were interrogated using three main questions: *Who* is invited to collaborate? *When* is this collaboration happening? And *what* is the participant allowed to do? Through those questions an array of examples were analysed to frame the complexity of the participative genre and its possible aesthetics and ontologies.

What emerged by using the *who, what* and *when* framework in participatory interactive documentaries is that what Dovey and Rose have called *distributed-authorship* (Dovey and Rose, forthcoming) is still very much a myth. If many projects ask users to participate by sending content (User Generated Content) few, if any, involve the user/participant in the strategic decisions that are going to frame the idea/interface/data architecture of the documentary. Possibly the only documentary that has pushed the notion of shared-authorship in interactive documentaries, by experimenting with collaborative governance, is *Global Lives* (2009-ongoing), and this is why it was selected as main case study of this mode in chapter five.

The possibility of shaping a project by potentially participating in any of its production levels pushes the autopoietic behaviour of the interactive documentary to its limits. Can the interaction between *Global Lives* and its participants change it to such an extent that its entire organization could be totally transformed? The answer to this question partly lies in *Global Lives*' future, and partly in other projects still to be conceived and experimented.

When the participant is merely a collaborator who adds content to a fixed form (pre-determined by an author) then her political freedom and impact is contained within a power structure outside her reach. In other words, User Generated Content strategies of collaboration depict and create a world where individuals have freedom of expression, but whose freedom of action is limited within the power structure of such world. On the other hand, when the collaborator becomes a co-author, entitled - to a certain degree - to change the rules and the structure of the interactive documentary, then freedom of action is seen as a key to construct the world itself, a world that is in constant flux and accepts transformation.

The aesthetics of the project, and its professional feel, might be less important in the participatory mode than in others. As a user, if asked whether I prefer browsing through Cizek's *Out My Window* or through the actual website of *Global Lives,* I would have no hesitation in preferring the first one. *Out My Window* is a high end production, it is sleek, has great content and is easy to navigate. Compared to it, *Global Lives* looks unfinished and amateurish. But, as a collaborator, the stakes are completely different. The possibility to shape a project by potentially participating to any of its production levels changes the interest it has for its participants. Here we jump from freedom of order of consumption (hypertext logic) to freedom of

perception of the world (experiential mode) to freedom of construction of the world (participative mode).

When I started this research I expected to find the participatory mode to be the mode that challenged existing documentary praxis more than any other. Opening content to users, allowing the documentary to grow and change as a living organism, seemed to indicate the beginning of a new era of documentary production where co-creation of reality, rather than representation and documentation of it, was the raison d'être of such new form. I have found this to be only partially true. While participatory documentaries are indeed potentially more autopoietic (more apt to transformation) than others, it is clear now that the key issue is not how open a Living Documentary is, but rather what levels and kinds of transformation it affords.

All interactive documentaries engender co-creation of reality, albeit through different logics. The level and specificity of such co-creation depends on which mode is used, and how. The choice then is a matter of interests: what do we want to re-negotiate? What type of transformation are we pursuing? If hypertext documentaries offer multiple ways to engage with a pre-authored set of ideas and points of view, conversational documentaries make it possible to experience and rehearse ethical decisions, or distant realities. Experiential documentaries can add layers to the felt perception of reality, and open an embodied enactor to a new affective space, while participative documentaries fundamentally question the role we want to have in society, allowing levels of activism that can shape parts of our world.

As in any expanding field, many more modes of interactivity will emerge creating even more opportunities to see/create the world as multiple and dynamic. For example, one might question what type of interactive documentaries will the semantic Web afford? The very recent emergence of HTML5 and dynamic data has opened interactive documentaries to a possible future of real-time documentaries that could potentially have no video at all, making other people's data, rather than the camera, the lenses through which reality is negotiated. The novelty of such documentaries opens many new fields of enquiry.

Other questions have emerged throughout the course of this research. How do we evaluate the success of an interactive documentary? Contrary to the television model (where audience size is a quantitative measurement of success) one might wonder if a networked media that agglomerates niches of interests could have a more

qualitative way of measuring success. After all, is it not enough for a Living Documentary just to be "alive"?

Overarching this lies the issue of author responsibility which merits research of its own. As writer and interactive creator Kerric Harvey wrote after i-Docs 2012's symposium, 'as creators, we still have to take final responsibility for the choices we make, even if that's to let other people make a lot of those choices' (2012:1). As I have tried to demonstrate in this research, interactive modes are not neutral. On the contrary, and only part of the chain of action-reaction they engender is predictable and controllable. I hope that the work done here will be useful to those who, like me, no longer wonder what an interactive documentary is, but rather what we can do, or change, through it.

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Appendix 1: *Rider Spoke*'s questionnaire

(Liverpool, 12-19th of February 2010)

F1

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

interesting to hear other peoples thoughts + feelings regarding the questions being asked. But my own thoughts into perspective.

2. How did the experience make you feel?

confussed to what other people feel even though sometimes I may feel I understand them.

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
(f.) A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Yes, I have visited Liverpool before and never seen this area of the city.

- what did you notice that you normally do not see?

?

F1

- What did you learn?

always explore

- What prompted an emotional reaction?

the questions asked, things I was seeing.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify) what I was seeing

6. What did you **like best** about Rider Spoke's experience?

directed and self directed tour I was taking

7. What did you **like least** about Rider Spoke's experience?

the voice of the lady who was narrating.

Thanks for your participation! This questionnaire is part of a larger research that I am doing for my PhD on *Interactive Documentary* at Goldsmiths University of London. If you wish to contact me for any further information please DO e-mail me at smmg67-PhD@yahoo.com

F2

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

It was different, in an good way. I got to see my city in a new way and had time to reflect and think. It was quite peaceful and liberating.

2. How did the experience make you feel?

peaceful, happy and interested.

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
(c.) An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Yes, it made me relate what I was thinking and feeling to my surroundings in a way I've never had the chance to do.

- what did you notice that you normally do not see?

I explored places I wouldn't usually go, and made an effort to see things in a different way.

F2

- What did you learn?

I found places I haven't seen before and questioned myself in a different way

- What prompted an emotional reaction?

Thinking about myself and questioning my thoughts, actions and experiences.

- Other (please specify)

5. In this ride, did you feel more inspired by:

(a.) the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

The chance to cycle around the city and take time to look and reflect.

7. What did you **like least** about Rider Spoke's experience?

The strange looks from people!

Thanks for your participation! This questionnaire is part of a larger research that I am doing for my PhD on *Interactive Documentary* at Goldsmiths University of London. If you wish to contact me for any further information please DO e-mail me at smmg67-PhD@yahoo.com

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

F3

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

It was really great. Really good to listen to the other people and I think I have fallen in love with the narrator.

2. How did the experience make you feel?

Happy, windswept, contemplative

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
(d.) An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
(g.) A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Yes, I went to parts I've never been to and I looked harder or from a different perspective.

➢ what did you notice that you normally do not see?

People are in their own heads a lot.
There is so much litter.
Dereliction looks beautiful in the sunset.
Red bricks

F3

- What did you learn?

That I wish I had a comforting voice in my head all the time so that I was always encouraged.

- What prompted an emotional reaction?

Exploring my own fear.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify)..... The scenery too.

6. What did you **like best** about Rider Spoke's experience?

The voice, the graphics, the beautiful city, the insights

7. What did you **like least** about Rider Spoke's experience?

The Cold!
And the Low Battery.

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F4

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

It was really therapeutic - especially because I don't usually cycle around the city. A great new perspective and a refreshing, individual way to spend an hour or so in a city I love.

2. How did the experience make you feel?

Made me feel that it is worth taking the time to participate in unusual events such as this. As a student I often feel that we don't involve ourselves in the city as we ought to. Get to know the city and yourself better.

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
(d. An exploration of the different ways people see the same city)
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Yes because it asked you to ascribe emotion and events to different aspects of the city. Made you ask questions and 'seek' the answers in physical places.

- what did you notice that you normally do not see?

Other people. Very very bumpy cobbled streets.

FG

- What did you learn?

I learned to involve myself in such events again and to notice more of the goings on around me.

- What prompted an emotional reaction?

listening to other's recordings.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify)...the combination.....

6. What did you **like best** about Rider Spoke's experience?

The opportunity to be asked questions and answer them without any concern for being embarassed etc. And the graphics ☺

7. What did you **like least** about Rider Spoke's experience?

Not long enough! And my poor cycling proficiency.
Not the fault of the designers though, obviously.

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F5

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: (up to 20) 21/30 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?
Intriguing! It felt funny talking to myself on a bike and I received some odd looks!

2. How did the experience make you feel?
It made me laugh a lot when listening back to what I had said, ~~but~~ but it was really interesting listening to other people's comments.

3. Which of the following is the most appropriate description of Rider Spoke:
Rider Spoke is....
a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?
By answering the questions it made me think more about my time in Liverpool.

➢ what did you notice that you normally do not see?
Buildings + monuments that were abit off the beaten track.

F5

- What did you learn?
That lots of other people were knew to the city + found it daunting at first.

- What prompted an emotional reaction?
The question about a restless desire - made me feel a little homesick

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?
It was really interesting - and I love biking as I come from Cambridge!

7. What did you **like least** about Rider Spoke's experience?
The cold weather!

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F6

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: (up to 20) 21/30 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

peaceful - finally managed to get a good look around Liverpool

2. How did the experience make you feel?

COLD!

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
(c.) An exploration of your personal glance to the city
(d.) An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

I wasn't cycling around the city with a plan - there's always somewhere specific to go. The cycling experience was a way to actually look at/explore the city properly with no distractions

➢ what did you notice that you normally do not see?

the way the juxtaposition of old & modern buildings by the docks - only just realised that it doesn't really work in Liverpool - makes it look haphazard.

- What did you learn?

  exercise can be enjoyable!

- What prompted an emotional reaction?

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

   the way you are able to experience the city and look into small details you wouldn't have noticed before.

7. What did you **like least** about Rider Spoke's experience?

   its too cold - but that's not your fault!

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F7

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: (F) / M

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

There are only two words I could describe ~~As~~ the ~~experience~~ Experience.

Unique and Enlightening

2. How did the experience make you feel?

An Individual.

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
(e.) A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Went to places I wouldn't normally go to so it's new.

- what did you notice that you normally do not see?

Determination in other people, what is considered the Norm.

F7

- What did you learn?

A little about myself and to explore Liverpool.

- What prompted an emotional reaction?

myself the questions by rider spoke's

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

Able to go anywhere.

7. What did you **like least** about Rider Spoke's experience?

Nothing, it was all good.

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(17)

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: F / (M)

Your Age Group: (up to 20) 21/30 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

I felt it was enjoyable, if a little cold, the insight into others lives was interesting ~~and~~ as if seeing the city through someone else's eyes.

2. How did the experience make you feel?

made me understand others views and experiences around the city.

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
(d.) An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Yes, roads and back streets were more accessable felt less intimidating ~~on~~ on a bike.

- what did you notice that you normally do not see?

architecture.

M1

- What did you learn?

- What prompted an emotional reaction?

The idea of loneliness in the city.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

The narrative from other riders.

7. What did you **like least** about Rider Spoke's experience?

the weather.

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(12)

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: F /(M)

Your Age Group: up to 20 21/30 31/40 (41/50) 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

Interesting to follow them around without being able to see them

2. How did the experience make you feel?

Part of something. I'd like to think we could set this up as an application on a mobile phone

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

It's like wandering about with a group of people listening to them. But they're not there, they've been there before & left echoes.

- what did you notice that you normally do not see?

The Lyver pool.

M2

- What did you learn?

Young children a could

- What prompted an emotional reaction?

thinking about my Dad & the canal

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

Listening to others & the fact that other people popped up on my screen as I moved about it.

7. What did you **like least** about Rider Spoke's experience?

The software interface was a bit clunky but I just used to it.

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12/02/10

M3

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: F / (M)

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?
Went round looking to hide and record. or ~~find~~ seek and listen to stories by previous participants

2. How did the experience make you feel?
That summer is coming even though it was freezing. It made me want to do the project on a summers day in a park/somewhere more green and collaborated. Felt embarrassed and a bit under prepare to tell stories.

3. Which of the following is the most appropriate description of Rider Spoke:
Rider Spoke is....
a. A cycling tour ✓
b. An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project ✓
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do?
In what way? ~~not~~ I went down alley ways that I normally would not have done. So the city was less intimidating on the bike.

➢ what did you notice that you normally do not see?

Nothing

(M3)

- What did you learn?

~~Actually~~ ~~Not~~ To explore, don't let things hold you back.

- What prompted an emotional reaction?

Actually being on a bike, used to cycle every day to school and College. Not have not done since being at Uni.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface ✓
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

Being on a bike -

7. What did you **like least** about Rider Spoke's experience?

Again being on a bike, have never cycled in a big city, so did not venture too far. Shame as this is my first time in Liverpool, so would have been perfect

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FEED-BACK FORM for RIDER SPOKE LIVERPOOL

175

Please (circle) the right answers when appropriate

Your Sex: F / (M)

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?
Sincerely enjoyable! I found the whole ride ~~[illegible]~~ to be wonderfully eye opening.

2. How did the experience make you feel?
Proud. From what I heard other say about my city and how it made me look at my city instilled in me a great sense of local pride x

3. Which of the following is the most appropriate description of Rider Spoke:
Rider Spoke is....
a. A cycling tour
b. An exploration of a city
(c.) An exploration of your personal glance to the city
(d.) An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do?
In what way?
All the places I cycled to, I see everyday and like everybody else think nothing of, but when asked beyond questions in our mundane ~~[illegible]~~ areas the city became more intimate, like one big bedroom.

➢ what did you notice that you normally do not see?
people staring at ~~[illegible]~~ some guy talking to the sat nav on his bike!

(174)

- What did you learn?

Not to be afraid!

- What prompted an emotional reaction?

The last question.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify) both!

6. What did you **like best** about Rider Spoke's experience?

Listening to "outsiders" views on Liverpool.

7. What did you **like least** about Rider Spoke's experience?

It ended!

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FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: F / (M)

Your Age Group: up to 20 21/30 (31/40) 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

I explored the city and looked for places I find interesting: for me, regeneration, industrial, nonplaces. I shared stories & experiences & feelings about the city with people I'll never meet

2. How did the experience make you feel?

calm, thoughtful, curious

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

I explore cities on foot & look for spaces that I can write about, think about. I'm interested in psychogeography & mythogeography (Wrights & Sites) This is quite a normal thing for me to be doing

- what did you notice that you normally do not see?

M5

- What did you learn?

- What prompted an emotional reaction?

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

7. What did you **like least** about Rider Spoke's experience?

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VT6

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: F / (M)

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

Very interesting. I felt that I started to get to know the characters of the people who had recorded messages.

2. How did the experience make you feel?

A mixture - some parts were humorous, others reflective or thought-provoking, others dull.

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
b. An exploration of a city
(c.) An exploration of your personal glance to the city
(d.) An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
(g.) A locative art project
h. A locative documentary
(i.) Other (please specify)...A glimpse into other people's views of the world.

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Yes, I was looking for places based on my responses to the questions, rather than for a practical reason.

➢ what did you notice that you normally do not see?

Levels of kushess, lighting varying drastically in the space of one street or block.

M6

- What did you learn?

Just about actual people's perspectives on actual things.

- What prompted an emotional reaction?

Some of the specific anecdotes.

- Other (please specify)

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

The glimpse into other people's lives.
The technical aspect / interface.

7. What did you **like least** about Rider Spoke's experience?

Found the voice over a little twee. Didn't match the very real language/style of the contributions.

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(17)

FEED-BACK FORM for RIDER SPOKE LIVERPOOL

Please (circle) the right answers when appropriate

Your Sex: F /(M)

Your Age Group: up to 20 (21/30) 31/40 41/50 51/60 more than 60

1. Could you describe in your own words the experience you just had while cycling?

It was very peaceful and serene, but I think the best thing about the whole experience was intentionally exploring new areas of the city.

2. How did the experience make you feel?

It made me feel very peaceful, but also I had a slight sense of regret that this is my last year - uni, and - Liverpool, and that I haven't really explored the city fully

3. Which of the following is the most appropriate description of Rider Spoke:

Rider Spoke is....

a. A cycling tour
(b) An exploration of a city
c. An exploration of your personal glance to the city
d. An exploration of the different ways people see the same city
e. A documentation of how different people relate to the same city
f. A locative game
g. A locative art project
h. A locative documentary
i. Other (please specify).....

4. During the cycle did you feel you were seeing /experiencing the city differently that you normally do? In what way?

Absolutely, it not only showed me new areas of the city, but because I was cycling my mind felt quite clear.

- what did you notice that you normally do not see?

All the quite back streets

(47)

- What did you learn? That its good to explore

- What prompted an emotional reaction? Feeling like I should of done this earlier

- Other (please specify) /

5. In this ride, did you feel more inspired by:

a. the questions posed by Rider Spoke's interface
b. other's people comments and thoughts
c. other (please specify).....

6. What did you **like best** about Rider Spoke's experience?

Seeing the city in a new light. Its easy to stick to the same paths Sometimes

7. What did you **like least** about Rider Spoke's experience?

NOTHING

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