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edited by
Gregory Paschalidis

Gregory Paschalidis	<i>Introduction – The social life of signs in the age of the Web</i>
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INTRODUCTION

The social life of signs in the age of the Web

Gregory Paschalidis

In the mid-1980s, upon reviewing the extent and the ways computers are used in semiotics, Pierre Maranda was disappointed to discover that very few semioticians were competent enough with the latest technological innovations, and thus able to deploy it to their advantage in their research. He hoped that 'as semioticians use the computer with greater and greater proficiency, they will inevitably come to reflect on its structure, its inner mechanisms, the programming languages which have evolved for it - in brief, they will want to see through the machine, to understand it as a semiotic object'. He goes on to predict that the development of semiotics will 'be linked to computer science, especially to new approaches in artificial intelligence. The association of the two fields would produce what could be labelled "semiotronics" or whatever other term should be coined to label that cross-fertilization' (Maranda 1987: 516).

Maranda's assessment of computer-based semiotic research, as well as his vision of the future, reflect the concerns of an age in which the computer was primarily valued as a computational rather than as a communication medium. Even the boldly interdisciplinary work of the late Peter Bøgh Andersen in the field of Organisational Semiotics, in the early 1990s, aimed 'to adapt and extend structuralist linguistics and semiotics, such that it becomes a coherent framework for understanding the semiotic aspects of computers and their use in work...a framework that allows...to understand and describe the interplay between work, organization, and language' (1990: 71), is still geared to the man/machine coupling of informatic activity. In Andersen's conception of the 'computer as a medium' (Andersen et al. 1993), in other words, the computer is still a data-processing machine. Between the mid-1980s and the mid-1990s, however, first the computer and subsequently the Internet, stopped being confined to the specialized uses of the corporate, governmental and research institutions, and proceeded to become an integral part of everyday life, bringing into being, within the span of less than a generation, a whole new communication environment, with radically transformative consequences and ramifications for the totality of human action and interaction.

Semiotics had been quick to respond to the sweeping transformation of the field of social communication that took place in the post-war decades, as a result of the explosive growth of visual and audio-visual media. Its energetic engagement with the powerful new media and modes of visual culture and communication - television, video, cinema, photography, design, advertising, comics, informational, scientific and educational imaging - proved instrumental in advancing the methodical investigation of the multimedia and multimodal sphere of modern visibility as well as the cultivation of effective visual literacies. Semiotics has proved rather slow, however, in responding to the rise of digital media and the new, Web-based communication environment.

During the early, meteoric rise of the public Internet, media theorists underscored the uniquely participatory and interactive character of the 'Second Media Age' (Poster 1995) or 'the network society' (Castells 1996). They strove to apprehend its cultural logic through concepts like 'hypertext' (Landow 1994, Bell and Kennedy 2000) and 'remediation' (Bolter and Grusin 1998), they explored 'the emergent conventions, recurrent design patterns, and key forms of new media' (Manovich 2001: 10) and charted the incipient cyber-cultures and cyber-communities (e.g. Penley and Ross 1991, Rheingold 1993, Potter 1996). Semiotics, on the other hand seemed to be under the sway of the outspokenly anti-digitalist postmodernist problematics of simulation,

disembodiment and hyperreality. The corruptive influence of this problematics is detectable in the section devoted to the digital media that Winfried Noth included in his volume on recent developments in media semiotics (Noth 1997). Be that as it may, in covering issues like chatting, electronic communities and the hypertext, the articles comprising this section were sure evidence that the younger generation of semioticians was starting to rise to the challenge of digital developments. But for a few exceptions (e.g. Jeanneret 1999, Codognet 2002), however, semiotics, and especially media semiotics, is conspicuously absent from the crucial debates and developments of the time in media theory and research.

In 2010, Marcel Danesi expresses his intimation that 'a primary aim of media semiotics' is to study the implications of the general 'semiotic law of media', according to which 'as the media change, so too the sign systems of culture' (Danesi 2010: 135, see also Danesi 2015: 485). By restating, in effect, in semiotic terms, Marshall McLuhan's controversial aphorism that 'the medium is the message', Danesi seems to favor the disentanglement of media semiotics from its customary focus on media representations and endorse the redirection of its attention to the bewildering scale and variety of semiotic changes and innovations spawned by the digital revolution. He proves reluctant, though, to flesh out this crucial intimation into a new research agenda for media semiotics in the digital era. Rather condescendingly, in fact, he describes the Internet as 'the primary platform for enacting the carnivalesque within us', convinced that its importance resides mainly in its role as a medium of parody pop culture or 'indie' culture (Danesi 2010: 148).

Danesi is convinced that media semiotics 'can provide relevant insights into the interconnection between technology and culture, perhaps like no other discipline can' (ibid). Once again, though, he fails to spell out the significance of this crucial point for the semiotic research agenda. The rise of the Web-centered communication environment has brought to the fore the issue of the technology-culture interface with a force and urgency, that no previous technology has ever done before. Semiotics is indeed in a privileged position to apprehend this interface as encompassing simultaneously the interaction of humans with machines and the mediated interaction between humans. But this potential has yet to be developed. In the tradition of Kittler's notion of 'semiotecnologies' (Kittler 1997), both Noth's notion of 'semiotic machines' (Noth 2002) and Jeanneret's notion of 'le techno-semiotique' (Jeanneret 2014) address the heterogeneous assemblages of technological and meaning-making operations characteristic of digital media in an explicitly negative manner, intended, as they are, to castigate the domination of technology over meaning. A much more fertile perspective has been developed by the actor-network theory (ANT) of Michel Callon, Bruno Latour and John Law, whose 'material-semiotic' method of mapping the intricate relations between humans and technology, replaces the neat division of the world into subjects and objects with dynamic constellations of human and non-human entities interlocked in relations of interpenetration and interaction through an endlessly recursive series of semiotizations and resemiotizations.

An especially constructive starting point for the advancement of web semiotics can be found in Gunther Kress's effort to adapt social semiotics to the needs, challenges and potentialities of the digital age. Having initially addressed the issue of the new literacies demanded by the new media (Kress 2003), his recent book on multimodality offers, in effect, a succinct outline of his social semiotic approach to communication, updated in a manner that takes full account of the historical distinctiveness of the 'new communicational world'. Kress suggests that the semiotic effects of the latter are felt at all three levels of the production, representation and dissemination of signs (Kress 2010: 6). Its most essential impact, however, is felt at the level of the social relations of communication. Siding with the emphasis placed by Poster (1995), Castells (1996), Jenkins (2006) and many others on the socially empowering and emancipatory potential of the new communication media, Kress takes the central characteristic of the contemporary media landscape to be the sweeping redistribution of power in communication (Kress 2010: 21). Having over the previous decades gradually detached himself from the traditional emphasis of semiotics on either structure, grammar, competence or ideological critique, Kress focuses here on the primacy of agency, which he conceptualizes through the metaphor of 'design'. The protagonist of the new social context of communication, Kress argues, is the semiotic labor of individuals as

makers and remakers of meaning through their 'equitable participation in the shaping of the semiotic and social world' (Kress 2010: 6).

The evolution of semiotic engagement with and contribution to the investigation and understanding of the digital age is certainly much more complex and variegated than its rather simplified and broad-brushed view I have outlined above. A more detailed account of this engagement, which gives due attention and credit to all implicated persons and projects, is undoubtedly required. It is certain that such a comprehensive assessment will reveal a much more favourable picture, particularly if we also take stock of the widespread use of semiotics as a constituent of a variety of interdisciplinary approaches, like cultural, visual, media and software studies. It is equally certain, though, that on the whole, the import of semiotics to what is, by all accounts, the paramount challenge of contemporary social and cultural sciences, leaves much to be desired.

Since the beginning of the new millennium, semiotics appears entrenched in its role as a valuable tool in the applied fields of web marketing (Stockinger 2001, Oswald 2012), Web and interface design (De Souza 2005, Speroni 2006, Islam 2011). The profusion of Web 2.0-related innovations, specifically, has significantly fostered the growth of semiotic research in areas like the emoticons (Warschauer and Grimes 2008), social tagging (Huang and Chuang 2009), mobile devices (Kress 2010), new forms of informational media (Cotte 2011), online gaming (Thorne et al. 2012), the novel forms of authorship (Junida and Sukyadi 2012) and multimodal digital humanities (O' Halloran 2015). The list is, of course, purely indicative, and is getting more expansive and diversified as the millennial generation of media-savvy researchers appreciate the fertility of semiotics in interrogating the workings and phenomena of the digital semiosphere. If the twentieth century history of both our social and our scientific responses to media change has taught us anything is that these responses are above all a generational matter. Quite evidently, then, it is primarily to this millennial generation of semioticians that *Punctum's* special issue on the 'Semiotics of the Web' addressed itself. Their response to our call has been particularly enthusiastic, vindicating our rather risky decision to inaugurate the publication of *Punctum* with a theme that, to the best of our knowledge, has not been treated by any monographic or collective volume as yet.

This special issue devoted to the 'Semiotics of the Web' opens with a backwards glance at the interactional space we take more or less for granted in our daily use of digital devices. Florian Hadler and Daniel Irrgang offer a genealogy of the concepts and theories that have contributed in shaping the human-computer interface. Revisiting a set of interface theories from backgrounds as various as philosophy, literary theory, architecture, media studies and computer science, the authors methodically expose the fundamentally historical and cultural character of interface design, i.e. its radical contingency, its overdetermination by a host of conflicting dictates, principles, values and perspectives.

The following three articles explore the digital sociality of the image, and more specifically, give insight into the ways the Web-based modes of the social circulation of the image function as conduits of powerful social and cultural energies. Julius Erdmann's article concerns everyday visual communication on social networking sites (SNS), a field he considers to have been both neglected and over-simplified by current research. Underlining the profuse heterogeneity of visual signs on SNS, the author dismisses its reductive treatment either in terms of identity-construction strategies or of mere technological processing. Combining a techno-semiotic with a social semiotic approach, Erdmann focuses on the still images on SNS, revealing the complex interplay of inter-individual meaning-making and the cultural conventions inscribed in the operations enabled by the graphic user interface.

Gabriele Marino, in his article, investigates the vast and variegated field of the Internet memes, the exemplary case of what Jenkins (2013) calls 'spreadable media'. Beginning by clarifying the distinctive textual characteristics of Internet memes, the author proceeds to systematically map both their semantic and syntactic aspects. The anatomy of their distinctive structure enables Marino to identify the features that make them amenable to the wide variety of uses and contexts, ensuring thus their recursive resemiotizations.

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Annick Girard's article deals with another singular phenomenon of popular web-culture, and, more specifically, Web celebrity culture: the making of animated 3D films to illustrate celebrated paintings by famous artists, like Picasso's *Guernica*. Owing to these peculiar acts of homage, that combine animation and musical accompaniment, these paintings acquire a totally unforeseen aspect, potency and aura. At the same time, they are transformed into creative self-performances that are the currency of the symbolic economy of Web-based sociality.

The next two articles pertain to the revitalization of the language of documentary through the use of digital tools and platforms. In the 1990s, the digital revolution was castigated by many as an anti-realist counter-revolution that undermined documentary evidence and veracity. Patricia Nogueira's article on the genre of interactive documentary, however, proves otherwise. Drawing upon a detailed analysis of David Dufresne's *Fort McMoney* (2013), Nogueira focuses on how the genre's characteristic multimodality, non-linear structure and interactive interface provide viewers with a kind of experience and understanding that foster new, powerful ways of critical meaning-making and active engagement with the issue at hand.

Catherine Bouko and Maria Giulia Dondero examine the form and functions of interactive documentary-dramas, as they have recently been developed by history museums on social networks like Facebook. Drawing from the semiopragmatic models of Hanot and Jost, the authors provide a detailed analysis of these highly innovative and popular audiovisual productions, highlighting the complex mix of authenticating and fictional strategies that they employ to create more immersive and engaging ways of cultivating historical literacy.

The final two articles of this special issue both concern issues of democracy in the Web. Jonathan Zittrain has used the concept of 'semiotic democracy', originally coined by John Fiske (1987) in the context of television, to describe the workings of online communities. His example of choice is the Wikipedia community, on account of its success in putting people of diverse cultural backgrounds to work together on the basis of a common ethos of discussion and consensus (Zittrain 2008: 147). In her article, Svetlana Sheypak examines a vital dimension of this democratic collaborative ethos, and specifically, the politeness rules governing interaction amongst the members of the global Wikipedia community. Employing a discursive approach centered on the concept of Face Threatening Act (FTA), the author focuses on a comparative study of the politeness rules found in the English, French and Russian pages of Wikipedia, revealing both the divergences caused by cultural variation but also, the equally notable convergences that stem from the singular ideology of the Wikipedia participatory model.

Turning to the wider issue of democracy on the Web in the final article of *Punctum's* special issue, Allan Bahroun takes up the issue of censorship and surveillance on the Chinese Internet, the fastest growing on a global scale. The author distances himself from the polarized positions prevailing over most of the prodigious cross-disciplinary literature that has developed around the issue of the so-called 'Great Firewall', since its construction in 1993. Taking Jeanneret's techno-semiotic perspective as the theoretical basis for his approach, Bahroun offers a detailed examination of the intricate interplay of power, resistance and technology, or, alternatively, of techno-power and techno-empowerment, demonstrating the need for a non-teleological conception of semiosis and a correlatively non-instrumental understanding of media.

To close, the principal intention of this special issue was to provide a forum for ongoing research projects on the semiotic phenomena, patterns and processes of the Web. It was inspired by the need to recast semiotics for the digital age and in the hope that young semioticians will be encouraged, true to Saussure's definition of the primary objective of semiotics, to pursue even more systematically and resolutely the study of the life of signs in the age of the Web.

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Instant Sensemaking, Immersion and Invisibility. Notes on the Genealogy of Interface Paradigms

Florian Hadler & Daniel Irrgang

This paper discusses current interface paradigms, the genealogy of the GUI and their underlying semiotic or diagrammatic principles. By conceptualizing the interface as a historical phenomenon, as a coded zone of differentiation and distinction, it opens a perspective on the interface that is both historically and theoretically informed, taking into consideration not only its social, economical or technological conditions, but also its philosophical and theoretical discourses. The consolidation of contemporary aspects, genealogical investigations and theoretical explorations provide outlines of a theoretical framework for the studies of interfaces and their historical developments.

KEYWORDS Human-Computer Interaction (HCI); Graphical User Interface (GUI); Interface design paradigms

Introduction

When talking about interface paradigms it seems useful to first interrogate the concepts and theories of the interface itself. The term 'interface' has become as common as mysterious, its usage varying across different approaches and contexts. The more it is taken for granted, the more it seems to escape our understanding (Hadler and Haupt: 2015). Therefore, we suggest a discussion of different theories of the interface before analyzing selected paradigms, not so much to extrapolate an established definition, but to render visible the dynamics and contradictions within the concept of the interface, its perspectives and applications and, last but not least, its contingency and historical dependencies. We selected a set of interface theories from backgrounds as various as philosophy, literary theory, architecture, media studies and computer science.

One of the most common understandings of the interface is that of a surface, of a two-dimensional space that can be described as a significant surface (Flusser 1973). The conceptualization of the interface as a surface implies certain characteristics, such as the spatialization of meaning and, accordingly, the notion of the semantic value of relations like proximity, overlap, hierarchy, dependency and sequence (Drucker 2011). Its theoretical frameworks draw from methodologies such as comic book analysis, graphical reading, frame analysis, cognitive semantics and diagrammatics. An obvious advantage of the spatialization of meaning is the combination of an overview with the possibility to easily grasp details; perceptual 'synthesis followed by analysis', as Flusser puts it (Flusser 1973: 101). But this conceptualization of the interface as a significant surface seems deficient, as the interface involves not only the arrangement of information on a screen, but also the interaction between two or more entities. Many interface theories, therefore, not only focus on the materiality or appearance of interfaces, but also necessarily include the relation between the subjects of the interface, which are either user and technology, user and user by means of technology, or any other entities that are linked together. This not only puts into perspective the interface as a zone of interaction, but also transcends the notion of the interface as a surface, as this broader scope is not limited to graphical user interfaces, as implied in the notion of a surface.

Rather, it also includes gateways between databases, code modules or other forms of machine based communication. The interface, in this perspective, renders incoherent modes of communication coherent.

The interface as a gateway, as a process or transition, is heavily informed by information sciences, cybernetics and systems theory. Once again, though, there are certain limitations thinking about the interface as a passive gateway or threshold, as it does not only link different entities, but at the same time *constitutes* them as participating interactors. It is a form of relation (Hookway 2014) but also a form of differentiation and distinction (Weibel 2001), a field of transition (Galloway 2012), a mediating environment and dynamic space (Drucker 2011), a fertile nexus (Dagognet 1982), that links and separates at the same time. That means, the interface divides its subjects by linking them together, it is 'not only defined by but also actively defines what is humane and what is machine' (Hookway 2014: 12). The interface includes 'processes of holding apart and drawing together, of confining and opening up, of disciplining and enabling, of excluding and including' (ibid.: 4).

This concept of the interface as a zone of division and transition leads to the conclusion that the interface is not only a mode of interaction or communication, but at the same time a structured set of codes, an artifact of complex processes and protocols, a space of power where creative, social, political, economical, as well as technological genealogies are inscribed. This renders the interface a historical phenomenon. As zone of transition, translation and transcoding, the interface becomes *necessary* in the light of the ever increasing complexity of technological artifacts. Since these artifacts tend to become black box-like apparatuses, incomprehensible in their functional principles for the majority of the users, they call for graspable interfaces to make the interactions with the apparatus possible again. This tendency can be described as a dialectic of structural complexity and functional simplicity (Flusser 1973). The architecture and construction of the artifacts are more and more intricate whereas the usage becomes easier and rather conventional. A phenomenon most significant in the field of human-computer interaction (HCI).

Rapid progresses in user interface design made the former calculating apparatus, the computer terminals operated by highly qualified professionals, usable 'for the rest of us', as Apple claimed in their advertising campaign for the Macintosh in 1984, introducing the graphical user interface to the consumer market. Our effort will be to make visible the current inscriptions of the interface by tracing some of its historical predecessors, its inspirations and conditions. Before looking at one of the major streams of the genealogy of the interface, the development of the graphical user interface, we provide a brief overview of some current paradigms in interface design and production.

Some Paradigms

The term paradigm in this context refers to Thomas S. Kuhn's concept, who uses it in two distinct, but intertwined senses: it is both a 'disciplinary matrix', a set of conscious or unconscious values, and a specific element within this set, serving as an example for the more abstract whole set of values and techniques (Kuhn 1962). These two sides of the paradigm mirror the hermeneutic circle, the production of knowledge in the human sciences. Knowledge of the particular presupposes knowledge of the whole and knowledge of the whole presupposes knowledge of the particular. Giorgio Agamben argues that the hermeneutic circle is, in fact, a paradigmatic circle: 'There is no duality here between "single phenomenon" and "the whole" [...]: the whole only results from the paradigmatic exposition of individual cases' (Agamben 2009: 27). We will employ this concept of paradigm as a tool of interpretation to current developments in interface design, looking both at concrete examples and singularities while at the same time deducting more general observations of the whole field of the interface.

The current developments in the area of consumer technology and software services are certainly diverse, but there seem to be certain underlying paradigms that are visible throughout a broad range of paradigmatic

products, such as the touch paradigm of the smartphone, the tablet and other devices that operate with haptic input, or the natural language paradigm for services like Siri, Facebook Search and Amazon Echo. Some of these (partly not so) new paradigms can be easily accessed and applied to software developments in the form of preformulated guidelines, that explicitly state their underlying principles and guiding concepts. Every big platform that provides cross-device operating systems makes sure that developers are aware of their constantly updated guidelines. These design and development resources – provided by the big players Apple, Google and Microsoft as online databases – became more and more relevant with the development of the app-economy starting shortly before the launch of the iPhone in 2007. With the rise of third-party developers producing software for existing cross-device operating systems, their products increasingly added value to the platforms on which they operate. In order to be attractive to the consumer, these platforms have to make sure that they provide a broad range of third party apps and services with a consistently good user experience.

One of the biggest and most obvious paradigms across all devices and applications is *simplicity*. It is way too broad to be treated as a general trend, but it groups together various aspects of developments. Overall simplicity enables the user to cope with complexity, to reduce decision-making and to allow a seamless flow of information and control. The approaches which aim to break down complexity, to create context sensitive modes of decisions and intuitive control can be differentiated. We suggest three distinct but overlapping sub-categories to look at the overall paradigm of simplicity.



Figure 1. The Strava application tracks athletic activities, analyzes and compares the data and provides diagrammatic overviews on smartphones or smartwatches (2015). (Source: Strava for Apple Watch product presentation; <http://www.strava.com/apple-watch>, accessed on April 26, 2015).

Instant Sensemaking

The first category we propose to call the *paradigm of Instant sensemaking*, concerns the intuitive and instant readability of and interactivity with data and content, as it can be seen in the numerous dashboards and diagrammatic representations of live actions, delivering immediate examinations and results and therefore not only allowing, but demanding the user's direct response (Irrgang and Hadler 2014). The Google AdWords Dashboard or any other online campaign tracking tool applies this paradigm – as well as the numerous self-quantifying apps to monitor certain user behaviors such as strava or the integrated health service from Apple's iOS (Fig. 1). Instant sensemaking is further supported by the touch paradigm, as can be seen on mobile devices, tablets or trackpads for picture editing, gaming and many other services, which provides the feeling of 'direct manipulation' as Apple calls it: 'When people directly manipulate onscreen objects instead of using separate controls to manipulate them, they're more engaged with their task and it's easier for them to understand the results of their actions'.¹

Immersion

The second category or sub-paradigm of simplicity, prominently featured across various interface guidelines, is closely related to instant sensemaking. What Apple calls 'engagement' and Google calls 'continuity of experience'² and is, at the same time, well known in film theory and practice as the 'découpage classique' or 'continuity editing', is what can be called the *paradigm of immersion*. Immersion becomes more and more relevant for third party developers, as it builds a lasting attraction for the user. Metrics such as 'returning users' and 'retention period' are crucial for monetization of apps, either through advertising or in-app purchases. The more immersive a service is, the more users will spend both time and money. Immersion is achieved not only by instantaneous and constant feedback, but also by social interaction with other users, by coherence of the design, as well as, by the use of intuitive control elements. The intuitiveness of the control elements is produced through the application of graphical 'metaphors' such as shadows, translucency, weight or other tactile attributes. In 2014 Apple shifted from the skeumorphistic approach of their first guidelines towards the so called 'flat design' principles; Google calls their approach 'material design', combining both elements of skeumorphism and flatness (Fig. 2). The application of metaphors is features strongly in both guidelines, and is explained as follows:

A material metaphor is the unifying theory of a rationalized space and a system of motion. The material is grounded in tactile reality, inspired by the study of paper and ink, yet technologically advanced and open to imagination and magic. Surfaces and edges of the material provide visual cues that are grounded in reality. The use of familiar tactile attributes helps users quickly understand affordances. Yet the flexibility of the material creates new affordances that supercede those in the physical world, without breaking the rules of physics. The fundamentals of light, surface, and movement are key to conveying how objects move, interact, and exist in space and in relation to each other. Realistic lighting shows seams, divides space, and indicates moving parts.³ When virtual objects and actions in an app are metaphors for familiar experiences – whether these experiences are rooted in the real world or the digital world – users quickly grasp how to use the app. It's best when an app uses a metaphor to suggest a usage or experience without letting the metaphor enforce the limitations of the object or action on which it's based. iOS apps have great scope for metaphors because people physically interact with the screen. Metaphors in iOS include: Moving layered views to expose content beneath them/Dragging, flicking, or swiping objects in a game/Tapping switches, sliding sliders, and spinning pickers/Flicking through pages of a book or magazine.⁴

The use of metaphors that reach beyond the simple graphic metaphors of icons, makes the modes and forms of interaction immediately understandable, without forcing the user to read manuals before using the software, enhancing, thus, both intuition and immersion.



Figure 2. Google Material Design applies lighting, shadows, translucency and layering as spatial metaphors to create immersive and intuitive design principles (2015). (Source: Google Material Design, part 'Introduction: Principles'; <http://www.google.de/design/spec/material-design/introduction.html#introduction-principles>, accessed on April 26, 2015).

Invisibility

The third category we propose, is a direct result of the immersion and instant sensemaking, but reaches beyond the simple design of screen elements. We call it the *paradigm of invisibility*. It is common knowledge among user interface designers that the best interface does not exist or, as Don Norman puts it: the real problem of the interface is that it is an interface. Interface design strives for an interface so intuitive that it appears in a constant oscillating state of both guiding the user and disappearing from his awareness. The goal, therefore, of each interface design is to disappear, to withdraw itself, to become imperceptible and ultimately invisible (cf. Zielinski 1997). This is partly achieved by immersion, which causes the user to forget that he is actually using a device or an app, just as a viewer forgets he is actually watching a movie or a player forgets he is playing a game. But it is also a paradigm that informs the development of ubiquitous computing, the 'backgroundability' of technology, such as RFID chips, near-field-communication between devices and objects and wearable

technology such as smartwatches or smartbands, stepcounters or even intrusive technology, like cochlear implants or other bodily enhancements. Voice or gesture control simulates 'natural' interaction as applied by Apple Siri, or the far field voice recognition as done by Amazon Echo, that constantly listens to every conversation in order to take up cues. Conversational search, as currently done by Google, deep integration such as the access of contacts, photos or other user data by third party apps or actionable notifications that allow interaction on the homescreen without opening the app, are all signs of this paradigm of invisibility, which is often referred to as 'shytech' – technology that hides itself. Invisibility relies heavily on cloud computing, on big data analysis, semantic search and learning algorithms, in order to reduce the number of decisions and to act proactively with regards to user needs, taking into account contexts such as user preferences and other external data. The usage of cloud based operations, of invisible and hidden computation, refers to the dialectic of structural complexity and functional simplicity as described by Flusser and others.

With the three paradigms related to simplicity, instant sensemaking, immersion and invisibility, we outlined some of the current trends and developments in interface design, software development and service production. Obviously our list is not complete, but offers an instructive picture of what is happening in the field of contemporary interface design. One could just as well elaborate on the rise of haptic interfaces, that are increasingly used for in-car-systems, gaming devices or virtual reality setups. Or dig deeper into natural language processing, artificial intelligence, semantic search and self-learning algorithms, that are essential for more intuitive and context sensitive search programs. And last but not least, the rise of the mobile device deeply affects standards of layout, typography and spacing for displaying content and enabling interaction, resulting in responsive, flexible and adaptive concepts that rearrange and resize content autonomously.

Instead of collecting more and more examples, we will turn now to examine the origins of the graphical user interface, which are directly related to the general paradigm of simplicity and the sub-paradigm of instant sensemaking. In doing so we hope to sketch a more detailed genealogy of the user interface of today. Based on that genealogical sketch we will take a closer look at their underlying iconic or diagrammatic and metaphorical principles.

Some Origins

The best example for the above described shift of the apparatuses becoming increasingly structurally complex while showing a strong tendency to appear functionally simple can be found in the dawn of the personal computer. The former calculating apparatus for highly specialized tasks turned into a device usable for daily office work with the presentation of the Xerox Star workstation in 1981. Only a few years later, personal computers entered the consumer market with the launch of the Apple Lisa (1983) and the Apple Macintosh (1984). While the Xerox Star was relatively expensive, the Apple personal computers were not only affordable for private households, but also especially designed for consumers, proposing an integration of the computer to everyday life. On a technological level, the driving force of this radical diversification – eventually becoming an important element of the strong socio-technological impact often reduced to the buzz word *information society* – consisted of basically two corresponding elements: the computer mouse and the graphical user interface (GUI). The Apple advertising campaign for the Macintosh was the first campaign for a computer that not only mentioned but even focused on the user interface (Johnson 1997).

Both the mouse and the GUI were vital for Macintosh's success. The structurally complex computer, formerly only operable through complex sequential command-lines, could now be used and controlled by functionally simple interactions with the computer mouse as pointing device, dealing with iconic and graphical representations on a clearly organized surface. In the ensemble 'human-interface-computer', the command-line interface (CLI) was replaced, at least for the bigger part of tasks, by interactions guided by a GUI. This new way of human-computer interaction (HCI) made possible a cognitively 'more intuitive' approach of direct

interaction and feedback, determining the interaction principles of computer interfaces and mobile devices until today. Whilst additionally creating a new kind of computer user (cf. Moran et al. 1983)⁵ – and soon replacing a highly specialized practice with a general cultural technique.

Although it was the Xerox Star that introduced the computer mouse and GUI to the market in 1981, both technologies existed long before. The mouse was invented in 1963, by Douglas C. Engelbart and Bill English, at Stanford Research Institute. The basic principles of GUI, such as manipulating objects on a screen by using a pointing device for receiving direct feedback,⁶ were developed even earlier by Ivan E. Sutherland. The Sketchpad system, designed at the MIT Lincoln Lab in the beginning of the 1960s, enabled its user to interactively draw geometrical figures on a computer screen by using a light pen (Sutherland 2003). Like Apple's approach twenty years later, Sutherland's goal was to make computers usable by a new group of less technology savvy people (Blackwell and Rodden 2003).

Sutherland's work, including the theoretical ideas published in his dissertation, a research report on Sketchpad, influenced the work of the Learning Research Group at the Xerox Palo Alto Research Center (PARC). The head of the group, Alan C. Kay, studied with Sutherland and was directly influenced by the assumptions underlying the Sketchpad project (Packer and Jordan 2001). In the early 1970s, at Xerox PARC, Kay elaborated these assumptions by applying the developmental psychology theories of Jean Piaget and Jerome Bruner that emphasize the crucial role of images and symbolic reasoning in learning processes (Kay 2001). He published his basic insights – defining, in effect, the Learning Research Group's agenda for the following decade – in the article 'A Personal Computer for Children of All Ages' (1972). In the latter he describes the Dynabook, an early vision of a tablet computer so easy to handle it could be used by children. In the mid-1970s, the synthesis and elaboration of Kay's research eventually led to the first known fully functional GUI, a graphical development environment for the object-oriented programming language Smalltalk (Fig. 3). The interface ran on the Xerox Alto, a computer work station with bitmap screen, keyboard, and mouse. It introduced the familiar GUI elements of overlapping windows, scrollbars and pop-up menus. Under the supervision of Kay, the Smalltalk GUI was developed at Xerox PARC by Dan Ingalls, Adele Goldberg, Larry Tesler, and others. Finally, David Canfield Smith added the icons (document, folder, dashboard references, etc.) to the graphical concept, which completed the research group's interaction principle of 'Windows, Icons, Menus, Pointing devices' (Kay 1993) and eventually led to the first commercial GUI of the Xerox Star (Fig. 4.).

In his short reflection on *User Interface. A Personal View* (1989), Alan Kay identifies an important stream in the genealogy of user interface design: the research on *human factors* in industry (Kay 2001). The optimization of the machine to its human operator – and vice versa – arose as an interdisciplinary approach soon referred to as *human factors and ergonomics* (Murrell 1965) in the middle of the 20th century.⁷ Similar to Branden Hookway, who in his recent book *Interface* (2014) emphasizes the Kinalog Display System, a navigational instrument of airplanes that intuitively provides the pilot with iconic information about the plane's horizontal orientation,⁸ as an important example in the history of interface design, Kay identifies the aeronautical technology of the 1950s, applying ergonomic principles, as an early attempt at user interface design. The extreme situation of a pilot dealing with a complex machine while flying at high velocity, demands for dashboards that enable an *instant sensemaking* for immediate decisions. Like Hookway and others, Kay considers the interface not from a merely technological perspective, but rather as a site where technological and human preconditions meet in structured moments of sensemaking and interaction. Thus he concludes:

Therefore, let me argue that the actual dawn of user interface design first happened when computer designers finally noticed, not just that end users had functioning minds, but that a better understanding of how those minds worked would completely shift the paradigm of interaction. (Kay 2001: 123)

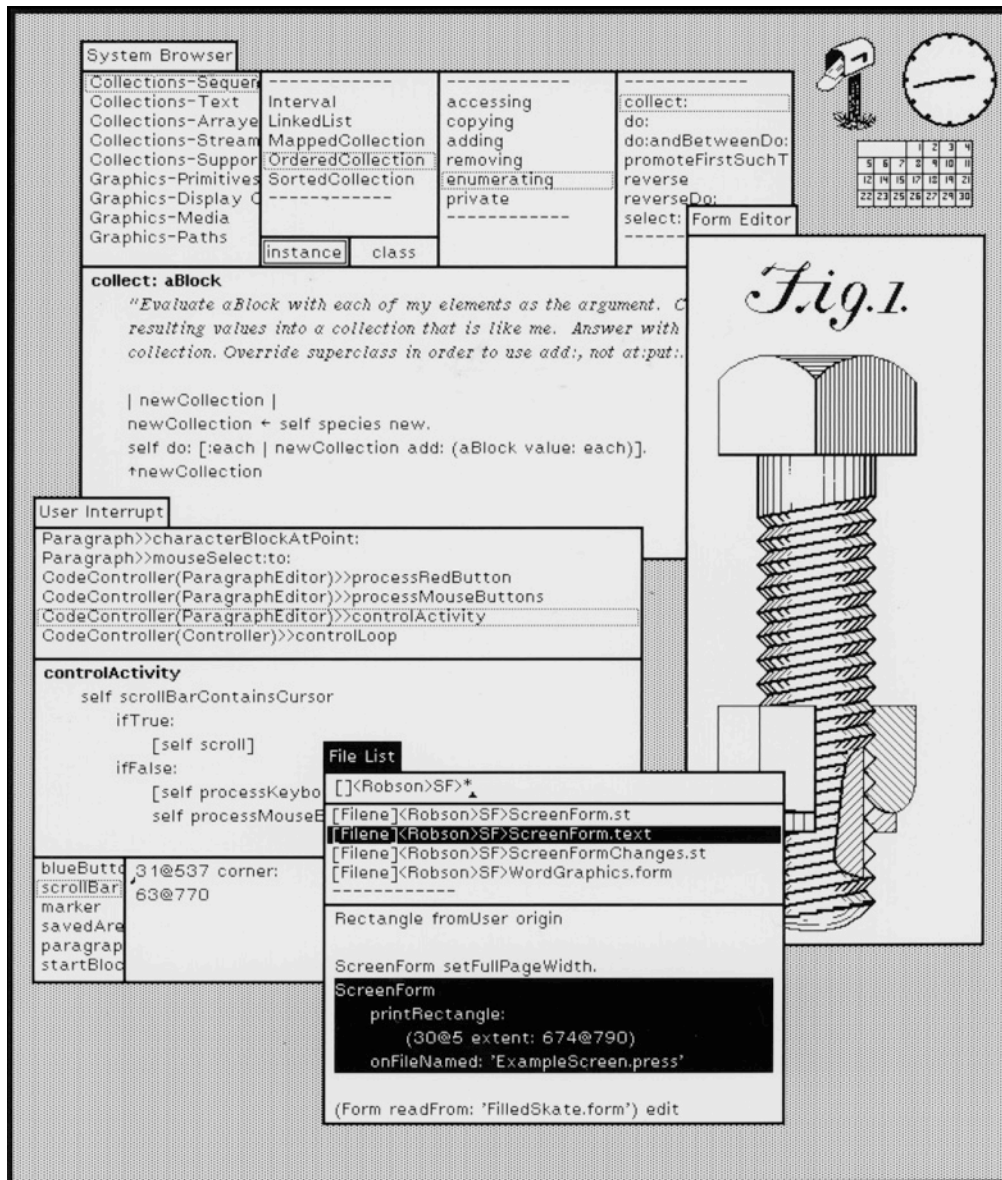


Figure 3: Screenshot of the GUI for the object-oriented programming language 'Smalltalk' on the Xerox Alto workstation (ca. 1980). (Source: Computer History Museum, Mountain View, CA, USA – online exhibition 'Input & Output'; <http://www.computerhistory.org/revolution/input-output/14/347/1859>, accessed on April 27, 2015).

In his studies of the history of HCI, Jonathan Grudin identified human factors and ergonomics (HF&E), which expanded its research field to HCI at the end of the 1960s, as one of the three pillars in the history of research investigating the relationship between computers and its (various groups of) users (Grudin 2005, 2012). The other two pillars identified by Grudin are 'information systems in management science' (IS), evolving around the same time, and 'computer-human interaction' (CHI), the most influential work being Xerox PARC. While HF&E and IS soon focused on the improvement of efficiency, CHI, although closely collaborating with researchers of HF&E until 1980, headed towards another direction and introduced cognitive aspects to HCI research – in order to figure out how the user's mind works, as Kay puts it.

The Learning Research Group led by Kay did not approach the question of a sufficient interface from a technological perspective, but rather started their work with examining the insights of psychology and cognitive studies. By applying developmental psychology theories, the research group started to learn about the preconditions of the user's mind when approaching a computer interface in order to figure out how potential cognitive barriers of abstraction could be lowered. The researchers studied Jean Piaget's theories of the

understanding and learning processes of children. Piaget suggested that a child's cognitive development does not proceed in a continuous or linear way, but rather in stages roughly tied to its age. In each stage, the child is capable of understanding certain things and correlations while it is not capable, yet, of understanding others. The developmental and educational psychologist Jerome S. Bruner elaborated Piaget's model of stages by identifying a different mentality in each stage: enactive (kinesthetic), iconic, and symbolic (cf. Atherton 2013). Kay adopted these mindsets of learning stages to formulate a type of best-practice for practical learning, that 'it is best to learn something kinesthetically, then iconically, and finally the intuitive knowledge will be in place that will allow the more powerful but less vivid symbolic processes to work at their strongest' (Kay 2001: 126f). The application of Piaget's and Bruner's models on different domains of understanding gave Kay and his colleagues important indications on how a computer interface could connect with these domains in order to provide intuitive usability. Based on these indications, they formulated the goal for their HCI research: '*Doing with Images makes Symbols*. The slogan also implies – as did Bruner – that one should start with – be grounded in – the concrete "doing with Images", and be carried into the more abstract "make Symbols"' (ibid.: 128).

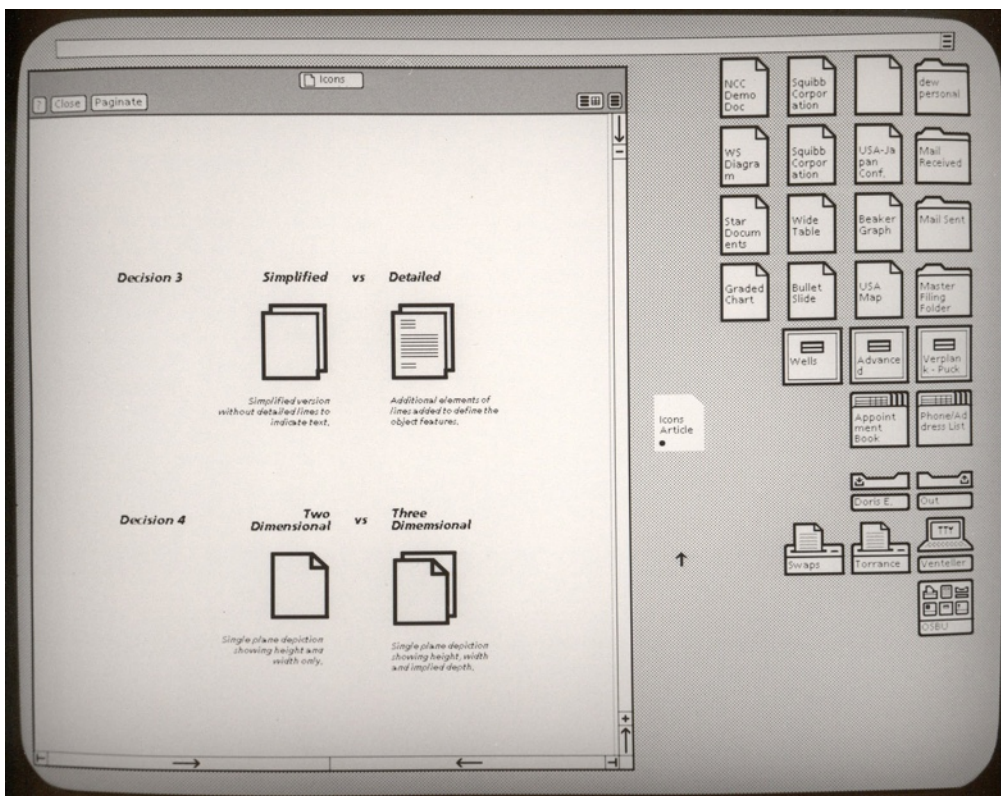


Figure 4: Scans of polaroid photographs of the screen of the Xerox Star 8010 workstation, taken in 1981. Source: Digi Barn Computer Museum; <http://www.digibarn.com/collections/screenshots/xerox-star-8010/index.html>, accessed on April 27th, 2015).

'Doing with Images' points to the principle of direct manipulation, the use of the mouse to navigate with and within the graphical elements on the screen – an *operational iconicity* (Stjernfelt 2007) in a very direct sense of the term. The goal of the research group was to design the act of navigation as intuitively as possible. Kay explains this approach towards intuitive interaction with the example of overlapping windows, a principle that was invented out of necessity: since the screen of the Xerox Alto was too small to display all the windows necessary for a complex task next to each other, Kay proposed to overlap the windows on the screen similar to sheets of paper on a desk, placing the important window (or task) on the top (or in the front).⁹ The act of clicking the window to place it on the top of the other windows and eventually performing a task references the common spatial gesture of selecting a desired object, taking it in the center of one's visual field, examining it for

the requirements needed, and possibly doing something with it. Kay explicates the implications of this kind of interaction:

This interaction was *modeless* in a special sense of the word [...] the user could always get to the next thing desired without any backing out. The contrast of the nice modeless interactions of windows with the clumsy command syntax of most previous systems directly suggested that everything should be made modeless. (Kay 2001: 129)

The modeless performance of tasks through the use of common gestures and spatial operations is a vital characteristic of GUI. This is made possible by its *topological* structure, that is, the specific arrangement of the graphical or iconic elements on the surface represented by the GUI, where each position of an element in relation to other elements has a specific meaning. Although this surface is two-dimensional, it indicates a three-dimensional space, e.g. through the visualization of windows as overlapping layers; in contemporary interfaces used in current OS such as iOS or Android, the simulated casting of a shadow or translucency is an explicit reference to spatiality, described in the guidelines from Google and Apple as tactile, spatial or material metaphors. The operation of drag and drop, the act of moving elements from one 'location' on the GUI to another, is another example for such a metaphorical spatial operation. The quick perception of and intuitive interaction with a GUI is taken, to a large extent, from this topological or spatial potential. The fact that Kay and his team obviously took this potential for granted (it is not explicitly discussed or questioned in their research reports) while topologically 'arranging' graphical elements on the virtual surface of the screen might be explained by the elementary character of visuospatial representations and interactions we experience on a daily basis.

Apparently, there is no research in the canon of HCI that focuses on this topological basis and precondition of GUI. There is, however, a body of empirical research on spatial references with regards to the navigation with mouse and cursor in terms of hand-eye coordination (cf. MacKenzie 2013: 75f) or with regards to spatial metaphors such as the *desktop metaphor*, whose implications we will discuss in the next paragraph (for a practical application of spatial metaphors in interaction design see Preim and Dachsel 2010: 110 f). In fact, for a long time, especially in the 1980s, the predominant paradigm of HCI research was based on the analogy of interaction between human and computer as a 'dialogue' (e.g. Martin 1973) or as 'communication' (e.g. Smith 1980). The problem with this analogy, which evokes a reciprocal relationship between user and computer, was already pointed out by Smith (1980):

In human-computer communication [...] the dissimilarities of the components form an obstacle. When interacting with a computer, the human has a model of the task environment, a set of goals and (typically) a diffuse model or image of how the computer represents the task. [...] [The computer] does not have a model of the users, their expectancies and preferred ways of reaching their goals, nor can it adept them. (ibid.: 25)

The conception of HCI as *dialogue* may have its origin in James Martin's *Design of Man-Computer Dialogues* (1973), an early and influential HCI book, which, despite its notion of dialogue, warns of the 'unfortunate tendency [...] to overly anthropomorphize the computer and its capabilities' (ibid.: 7). With the rise of graphical user interfaces and later, the World Wide Web and its 'navigating' and 'exploring' users, it is probable that spatial metaphors slowly replaced the dialogue analogy.

A common principle of GUI based on a spatial metaphor is the desktop. The graphical elements of the GUI for Smalltalk and especially the icons developed for the Xerox Star interface established a strong and, until recently, consistent reference to the classical office space: paper sheets, folders, painting devices and writing tools dominate the GUI visuality. This is how the developers of the Xerox Star GUI described their invention in 1982:

We decided to create electronic counterparts to the physical objects in an office: paper, folders, file cabinets, mail boxes, and so on – an electronic metaphor for the office. We hoped that this would make the electronic ‘world’ seem more familiar, less alien, and require less training. (Smith et al. 1982: 256)

However, the desktop metaphor seems to lose its dominant position with the rise of mobile devices, relying on dashboard-like icons for instant sensemaking, or touch technology, applying simple and plain shapes as reference points for direct interaction. The metaphorical capacities of iconic and graphical representations for processes of learning and understanding the functionality of a GUI directly builds on the application of Piaget’s and Bruner’s theories to GUI design by Kay and his team, especially on the stage of iconic mentality. However, Steven Johnson (1997) points out that the success of this metaphorical or iconic approach to GUI is not the highest possible similarity to or even simulation of reality. Rather, a certain level of abstraction is necessary and vital for providing an intuitive interaction. In fact, there is a difference between interacting with the clearly arranged document icons and more or less clearly arranged windows opened on the computer screen, and dealing with the usual mess of papers, notes, books, and other objects on ones writing desk. It seems that a kind of balance is necessary when designing a ‘well-tempered’ GUI: an iconic similarity should be provided, giving the user references to the meaning of the virtual objects by referencing familiar objects in the physical world; at the same time, an *operational iconicity* needs to be considered by keeping the GUI visually simple and with clearly arranged elements, utilizing its topological advantages.

Since its early days, HCI research focusses on an explorative mode of ‘trial and error’ by empirically verifying or falsifying hypotheses in user experiments (cf. MacKenzie 2013). In order to complement such an approach with a stronger theoretical framework, it is necessary to examine the basic preconditions of GUI technology and understand the principles that lead to the success of this interface paradigm. A paradigm taken to a whole new level with the rise of contemporary touch technologies, enabling an even more immediate manipulation. One does not need to start such a basic research from scratch. There are other fields and disciplines dealing with similar questions of representation, operation, and interaction, such as research in *diagrammatics* or the (linguistic) study of *metaphorical projections*. Let us take a closer look at such possible answers in the next section.

Some Principles

Paradigms and origins are two perspectives of looking at interfaces – one is contemporary, one is historical or genealogical. We suggest a third one, a rather ‘timeless’ perspective, what we call *principles*, describing theoretical frameworks that deal with the very basic conditions of human cognition with regards not only to interfaces, but to comprehension in general. The interface, in this perspective, is not just a process, device or surface for human-machine interaction, but an instrument to see, understand and act. It is an access to a world that becomes more and more mediated through all kinds of ubiquitous interfaces. The interface in this sense might be the edge or periphery of the world and therefore a general attribute or condition of a human being, a constitution of subjects. To rephrase Wittgenstein’s statement ‘The subject does not belong to the world; rather, it is a limit of the world’ (Wittgenstein 1922: sect. 5.632), one could say that an interface does not belong to the world, but designates its limits.

Diagrams

With regards to the topological structure of representations and their interactive capacity, or operational iconicity, one may consult the insights of the research on *diagrammatics*, a genuinely interdisciplinary approach

towards the representational and operational dimensions of diagrams.¹⁰ Diagrammatics became increasingly popular in recent years. One explanation for this rising interest might be its reception in the aftermath of the *icon turn* and the *spatial* or *topological turn* in humanities – since a diagrammatic representation deals with its object in a *visuospatial* manner: it visualizes the relations of its object, often not visible by the naked eye, by representing structural elements on a two-dimensional surface as concrete relations. Sometimes, this mode of representation makes diagrams more effective than sentential representations such as text when it comes to the necessity of fast information retrieval or instant sensemaking. The far-reaching implications of this simple observation was described by Bertrand Russell nearly a century ago:

There is, however, a complication about language as a method of representing a system, namely that words which mean relations are not themselves relations, but just as substantial or unsubstantial as other words. In this respect a map, for instance, is superior to language, since the fact that one place is to the west of another is represented by the fact that the corresponding place on the map is to the left of the other; that is to say, a relation is represented by a relation. But in language this is not the case [...]; the word ‘precedes’, though it means a relation, is not a relation. I believe that this simple fact is at the bottom of the hopeless muddle which has prevailed in all schools of philosophy as to the nature of relations. (Russell 1988 [1922]: 152)

The specific spatial or topological structure of diagrammatic representations is described by the philosopher Sybille Krämer (2009: 95) as a ‘language of space’ [*Sprache des Raumes*], deriving its cognitive power from the two-dimensionality and simultaneity of the presented relations. Among other characteristics, Krämer identifies ‘two-dimensionality’ or ‘spatiality’ and ‘directionality’ as basic modes of the presented elements. The way elements are positioned on the two-dimensional surface is not arbitrary but has a specific meaning: up or down, in center or periphery, as part of a cluster or in isolation, in close or distant proximity to other elements – relations are represented by relations. This topological organization of diagrammatic representations allows an instant sensemaking based on the specific meaning of the displayed relations. This cognitive advantage is characterized by the cognitive science approach towards diagrammatics as *locational indexing of information*:

This form of indexing means that information that tends to be needed for the same inference can usually be found in adjacent locations in a diagram, so reducing the amount of search required to find the information. Further, perceptual inferences with diagrams allow the power of the highly parallel human visual system to replace more cumbersome serial logical inferences. (Cheng et al. 2001: 86).

The cognitive advantages of diagrammatic representations apply to the cognitive advantages of graphical user interfaces as described above. Both topologically arranged representations, they make use of locational indexing of information. Moreover, they apply basic categories of bodily orientation in space (up/down, in/out, etc.) to the abstract domain of understanding and operating with icons and other signs. There is a fundamental connection between abstract symbolic operations and concrete bodily experiences in a physical environment for understanding and creating meaning. The relation between embodied (spatial/temporal) experience, perception, and cognition has been at the center of phenomenology, at least since Edmund Husserl. Its theoretical application, together with positions from cognitive science, forms a current stream in interface studies (cf. Gallagher 2014, Harrell and Chow 2011).

Objects, artifacts, phenomena

Phenomenology after Husserl focuses on how *Sachen* (Husserl) – objects, artifacts, or phenomena – experienced by the human consciousness ‘shape’ perception and cognition. Its aim is, briefly, to identify basic modes and functions of consciousness. With regards to the topics discussed in this paper, Husserl’s (1991) work *Ding und Raum* [Thing and Space] is particularly interesting. Here Husserl investigates the meaning of objects in an environment for perceptual experience, emphasizing basic categories for any phenomenological experience, such as the relation of the human body to (moving) artifacts in an environment and the question how the body is affected by or reacts to such artifacts. Husserl describes the bodily experience and its spatial and temporal relativity as basic preconditions of the human attempt to make sense of phenomena. Martin Heidegger stressed this ‘pragmatic engagement’ towards the world as our primary mode of making sense of our environment, rather than a distant observation of it (Gallagher 2014).¹¹ The role of the body and its motor capacities in our attempt to make sense of the world is made explicit in the work of Maurice Merleau-Ponty (cf. Harrell and Chow 2011).

We cannot go much deeper into the recent history of phenomenology here. For the sake of the argument, however, it is important to briefly reflect on the adaption of phenomenological concepts in current studies of cognitive science and on its implications for interface or interaction design. As Gallagher (2014) summarizes, there is a series of evolving studies exploring the bodily or sensory-motor basis of perception and cognition – a basis that could be described as a pragmatic apriority: ‘I see and understand an object in terms of what I can do with it.’ (ibid.) With respect to interaction and interface design, this precondition might become most clear in the concept of *affordance* (ibid.).¹² The cognitive and cultural effects of the mind-object relation is phrased by Gallagher with reference to the ‘extended mind hypothesis’, assuming an interdependence between technology and culture or human cognition: tools and other artifacts do not only facilitate cognitive processes but also shape the human mind in a specific way. Such a connection is already described by the media or cultural theory of Marshall McLuhan (1964) and Vilém Flusser (2015), while the idea of a non-trivial interdependence of technology and culture has been articulated at least from the philosophies of technology by Arnold Gehlen and Helmuth Plessner or the cultural studies perspective of Raymond Williams. With regards to phenomenology, Gallagher concludes that ‘the cognitive process is in some cases constituted and in some cases simply facilitated depending on the nature of the body-environment coupling’ (Gallagher 2014).

While adapting such a phenomenological and cognitive science perspective to the design of gestural interfaces, Harrell and Chow (2011) argue that bodily motor actions also enter the level of *conceptual* meaning. With reference to HCI, they describe basic navigational patterns such as drag and drop or swiping a menu on a touch screen as a direct reference to spatial experiences: ‘We need to “see” something being “moved” from one location to another. In a GUI environment [...] a user no longer notices details of the action after many repetitions’ (ibid.).

Surprisingly, these current efforts to apply phenomenology and cognitive science to the study of interfaces do not utilize a field of study that investigates the implications of bodily or spatial experience on a very basic conceptual level: *Cognitive semantics* (cf. Johnson and Lakoff 1980), from a linguistics perspective, focuses on the role of metaphorical projections in perception and cognition. *Spatially* organized image schemata play a special role for cognitive semantics, as pointed out by Mark Johnson (1987), a theory he subsequently elaborated, together with George Lakoff (1999), as a philosophy of the ‘embodied mind’. We will have a closer look at Johnson’s early approach in the next section.

Metaphors

It is a linguistic paradigm that metaphorical projections are basic principles for processes of understanding and creation of meaning (cf. Johnson and Lakoff 1980, Kövecses 2010). The desktop metaphor

might be the best known example of such an iconic creation of meaning in GUI design. However, it might not be the iconic or metaphoric reference to a familiar office environment what gives GUI visualizations their strength. Although there is no doubt about the advantages of providing user orientation – by e.g. designing a document on the screen as a graphical icon similar to a sheet of paper – what might be even more striking for the cognitive potential of GUI are the basic metaphorical categories as described by Johnson (1987) with regards to spatial image schemata.

Johnson provides a phenomenological analysis of spatial relations as experienced by the human body in its physical environment. Thus he identifies ‘image-schematic experiential structures and their figurative elaborations and projections onto abstract domains of understanding’ (ibid.: xxxviii). Johnson’s spatial image schemata are determined by basic spatial formations, as reflected by the *containment schema*, and by basic spatial operations, as reflected by the *in-out schema* – to mention just two examples of schemata. The containment schema is a cognitive structure determined by our bodily experience of either being in a closed space (a ‘container’) or of perceiving an object inside of another object. According to Johnson, the containment schema ‘concerns the nature of negation’ (ibid.: 40): every object *in* the container belongs to the same category, objects *outside* of the container do not, ‘so that whatever is *within* the category is *in* the appropriate container’ (ibid.). The in-out schema is closely connected to containment, but rather relating to the *operation* of taking something in or out of a container. These schemata are metaphorically projected to abstract domains of understanding in order to structure an experience and to make sense out of it, as can be seen in metaphorical expressions such as ‘*entering into* a conversation’ which makes use of the in-out schema (ibid. 31).

The containment schema and the in-out schema are two excellent examples of schemata at work in the interaction with a GUI. The first one applies to documents in a folder or to objects in a window. Here the graphical representation makes use of the containment schema and thus allows to categorize elements not only by spatial indexing but also by separating the elements from elements of another category (by putting them to a specific folder or window). The act of putting the object in its graphical ‘container’, by using the drag and drop or copy and paste functionality, involves, on the other hand, the in-out schema. Finally, the close connection between both schemata and GUI principles becomes particularly clear in a research report by the Xerox Star GUI developers from 1982, where the windows principle is metaphorically explained:

You can ‘open’ an icon to deal with what it represents. This enables you to read documents, inspect the content of folders and file drawers [...]. When opened, an icon expands into a larger form called ‘window’, which displays the icon’s contents. Windows are the principal mechanism for displaying and manipulating information. (Smith et al. 1982: 256)

The assumption that there are basic metaphorical projections at work, and that the prominent desktop metaphor might not be that powerful after all, gives a whole new dimension to the importance of topological principles for GUI design. It is supported by current GUI developments, e.g. for mobile devices or for the operation system Microsoft Windows 8, optimized for touch interaction, where graphical or iconic references to an office environment are drastically reduced (Fig. 5).¹³ The adaption of the cognitive semantics approach – investigating the influence of bodily experience and spatial categories on domains of abstract conceptual understanding – to a phenomenological and cognitive science approach towards interface design could be fruitful for both fields of study.



Figure 5: Clear and flat design of the GUI Microsoft Windows 8, 2015. (Source: Microsoft Windows 8 product presentation; <http://windows.microsoft.com/en-us/windows/home>, accessed on April 28th, 2015).

Conclusions

We suggested three different approaches to the interface: a contemporary one, looking at the paradigms of current interfaces; a historical one, examining the contingency and conditions of the current developments; and a principal one, looking at the very basic conditions of human perception. Although each approach might be different in its focus and vocabulary, they appear to be deeply intertwined. The current paradigms are obviously related to their genealogical predecessors, and represent perspectives which all relate to debates about basic human cognition. By juxtaposing these three perspectives, it has become clear that a comprehensive theory of the interface as surface, process and constitutive nexus has to take into consideration not only one, but all three aspects and therefore can not be limited to any one discipline. Rather, it demands an interdisciplinary approach that draws from semiotics, diagrammatics, cognitive science, cognitive semantics, phenomenology, ergonomics, and which also considers philosophical and historical debates about perception and cognition, economics, technology, engineering, architecture and many more. It seems reasonable to combine these perspectives into a truly multidisciplinary approach in order to understand interfaces in their dynamic developments – and to make them visible again, especially when they are about to disappear and to withdraw themselves from our perception. We strove to contribute to the already existing interdisciplinary discourse on interfaces, hoping that more comprehensive approaches will emerge from different disciplinary backgrounds, that combine technological, sociological, economical and aesthetic aspects into a perspective that considers interfaces as truly dynamic, cultural phenomena.

NOTES

1. Apple iOS Developer Library, iOS Developer Guidelines: Design Principles (https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/Principles.html#apple_ref/doc/uid/TP40006556-CH4-SW1, accessed on April 26, 2015).
2. Google Material Design, Introduction: Principles (<http://www.google.com/design/spec/material-design/introduction.html#introduction-principles>, accessed on April 26, 2015).

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3. Google Material Design, Introduction: Principles (<http://www.google.com/design/spec/material-design/introduction.html#introduction-principles>, accessed on April 26, 2015).
4. Apple iOS Developer Library, iOS Developer Guidelines: Design Principles (https://developer.apple.com/library/ios/documentation/UserExperience/Conceptual/MobileHIG/Principles.html#apple_ref/doc/uid/TP40006556-CH4-SW1, accessed on April 26, 2015).
5. The compendium *The Psychology of Human-Computer Interaction* by Thomas P. Moran, Stuart K. Card, and Allen Newell is considered as the groundbreaking publication establishing a user-centered view in computer science and related fields. (cf. Grudin 2005) However, investigating the 'human factor' in computing did already play a role in research of ergonomics and human factors since the 1950s. An early *explicit* articulation of the user in the scope of 'human interaction with computers' can be found in the anthology with the same title by H. T. Smith and T. R. G. Green (1980).
6. The aspect of feedback is central when it comes to HCI in general. In *Human Interaction With Computers*, H. T. Smith (1980) points out the attraction of feedback experienced by the user: 'It is the very tightness of the person-computer feedback loop that sucks in the user [...]' (ibid.: 12). The user does not even need to understand the computer system tasks at work, '[a]s long as there is a unique and observable response of the system to each user input [...]' (ibid. 26).
7. The evolving of research groups investigating human factors in industry, which eventually lead to the foundation of the 'Human Research Society' in 1949, soon renamed to 'Ergonomics Research Society' in 1950 (Murrell 1965), can be discussed as a product of two dominant capitalist discourses of the 20th century: economic optimization and, since the beginning of the 1950s, cybernetics. However, the growing importance of ergonomics as research on the optimization of man-machine processes in order to deal with the ever increasing structural complexity of the apparatuses might mark an important milestone in the formation of *media ecologies* as discussed by Neil Postman in the 1970s or by Erich Hörl today.
8. Lawrence J. Fogel proposed the Kinalog Display System in *Human Factors: The Journal of the Human Factors and Ergonomics Society* in 1959.
9. The analogy of sheet staples is already quite close to the famous *desktop metaphor* that became a central element of GUI standards. Strangely, the principle of overlapping windows was not adapted for the Xerox Star. Here, windows can not overlap but have to be placed next to each other, limiting the number of parallelly open windows on the screen significantly. The principle of overlapping windows was later adapted by Apple for the Lisa and Macintosh GUI.
10. The bulk of the studies in diagrammatics, in disciplines such as media or cultural studies, art history, philosophy, semiotics, logics, or cognitive science, is (at least in parts) informed by a semiotics perspective: As a sub-group of the icon (Peirce), diagrams as signs signify their object not by means of visual similarity such as form or color, but by *structural* correspondence. Moreover, studies in diagrammatics are not only about a specific strategy of visualization. Rather, they also examine the *operational iconicity* (Krämer 2009 & 2012, Stjernfelt 2007) of diagrams or, in other words, *what one can do with a diagram* in order to learn something new about its object. This diagrammatically mediated thought experiment, aiming at an imaginary change of the object by rearranging and modifying the diagram (Bauer and Ernst 2011, Bender 2010), can be described as a specific mode of 'behavior in rehearsal' ['*Probehandeln*' (Posner 2009: 2014)] wherein the diagrammatic representation plays the role of a catalyzer.
11. Heidegger's *Zuhandenheit* (ready-to-hand), the 'vanishing' of a well-working tool while using it (e. g. the carpenter that is not constantly aware of the hammer while using it – it gets an inherent part of the practice of nailing), or *Vorhandenheit* (present-at-hand), the object which shows itself resisting its use (e. g. the hammer is broken or badly designed and difficult to use), are two categories which should be considered in studies about the usability of interfaces and in design processes in general.

12. An object design intuitively implying its use – e. g. a button element in a GUI, designed to show the same sensory (visual) characteristics as a 'physical' button which can be pressed down by one's thumb. Design concepts relying on affordance form the basis of skeuomorphism, especially in interface design: Skeuomorphic design elements do not have a specific function except implying or signifying a specific use of interface elements (e. g. a music production application emulating a synthesizer which is designed similar to an analogue Moog synthesizer, including patch cables and wooden chassis). On an analytical level, design strategies of affordance or skeuomorphism relate to McLuhan's hypothesis that every new medium includes (aspects of) its predecessors ('the older medium'). (McLuhan 1964) Here we disagree with McLuhan: Such design strategies could be described as practices of *adaptation* (of technologies, signs, materiality, practices, etc.) rather than, as McLuhan stated, a process of *replacing* old media (in other words: media convergence theory vs. media extinction theory).
13. The fact that users of Windows 8 complained about the new very clear and flat design, which generated a lot of media attention, might be explained with the loss of graphical references ingrained in usage by the classical Windows environments, which resulted in cognitive dissonances while coping with the new graphical structure of Windows 8.

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Semiotics of Pictorial Signs on Social Networking Sites: Remarks on a Neglected Field of Study

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The paper aims at considering characteristics from one field of contemporary visual studies that has for a long time been neglected in academic research: Pictorial signs on Social Network Sites (SNS) are an outstanding class of semiotic resources that is greatly shaped by processes of technological and collective sign production and distribution. A brief examination of the scholarly research on the pragmatics and semiotics of pictorial signs on SNS shows that the heterogeneity of visual signs is often neglected and that it mostly concentrates on one aspect of these pictorial signs: their technological production or their purpose for individual self-disclosure. The paper therefore considers the semiosis of pictorial signs on SNS in a holistic perspective as one the one hand produced by individual and collective meaning making as well as on the other hand a product of technological framing. It therefore develops a techno-semiotic pragmatic account that takes into consideration both processes. Starting from a prominent class of pictorial signs on SNS during Tunisian Revolution, the Tunisian Flag graphics, the paper then shows that communicative and social interaction functions on the graphic interface of SNS ('like'-function, sharing and commenting option) are not only directly inscribed into the pictorial frame, but also greatly influence the reading of a pictorial sign. The location of images on the SNS' interface has an impact on its meaning and on the social functions of a pictorial sign, as profile pictures are directly linked to the online identity of the user. Through technological sign processing, the polysemy of the image is reduced. We therefore consider the images on the one hand as individual self-narratives and on the other as instances of SNS' visual culture that brings out dominant visual codes but also allows social and political movements to spread.

KEYWORDS Internet; Social Networking Sites; visual culture; socio-semiotics; Tunisian Revolution

Introduction

In 2014, American art critic Jerry Saltz published an essay on the history and aesthetics of the selfie.¹ Saltz points out that selfies are characterized by a distinct aesthetic that is greatly influenced by their production and distribution process. Following this argumentation, selfies dispose of a structural autonomy which differs from other already familiar genres, such as photographic portraits and amateur photography. This structural autonomy is not only due to the aesthetic features of selfies – including the subject's arm visible in the photograph or a wide-lens angle on the face – but also to inherent technical features of mobile camera devices and publishing on Social Networking Sites (SNSs).² From a semiotic point of view, therefore, we must ask how those features that are not directly part of the pictorial sign itself might influence the reading of an online picture. Since selfies are not the only category of still photographs published on SNSs, this paper aims to introduce a general semiotic reading of SNSs' still images in order to elaborate a holistic model for their understanding. A review of the research on the pragmatics and semiotics of pictorial signs on SNSs shows that the heterogeneity of visual signs is often neglected and that most attention is paid to only two aspects of these signs: their technological production and their purpose for individual self-disclosure. The paper then opens up a techno-semiotic approach to online still images on SNSs that aims at combining both aspects and introducing the technical features of SNSs to a socio-semiotic reading of the pictures. To give a rather comprehensive insight

into the interrelationships between those levels, the paper firstly tracks the making of a sign, from its creation via the use of image-processing technologies, through its publication on the graphic interfaces of social networks, to its collective shaping, redistribution and negation. This becoming and transformation of visual signs inside the techno-social space of online social networks also determines their semiotic characteristics. With regard to examples of popular still photographs that were widely shared and reproduced during the Tunisian Revolution of 2011, we will revisit the semiosis, narrativity and cultural semiotics of visual signs on SNSs.

Everyday Visual Communication on SNSs

Everyday visual communication on social networking sites is a largely neglected field of study in the humanities, cultural studies, media studies and semiotics. Even though we find studies offering basic introduction to the interweaving of visual communication, media and everyday life that also consider visual signs on the Internet (cf. Manovich 2001; Kress and Van Leeuwen 2006; Mirzoeff 2009; Pink 2012; Lobinger 2012), there is as yet no such textbook on the concrete visual signs on the Internet.

Amid the abundance of specialized publications that deal with the pragmatics and semiotics of visual signs on social networking sites, we can outline two general perspectives: On the one hand, the dominant research focus is on self-representation and self-disclosure through images. These publications consider individual pictures or categories of visual signs on SNSs as a means of social interaction that is based on collective sense-making and interpersonal negotiation of meaning (cf. Döring et al. 2006; Hancock and Toma 2009; Mendelson and Papacharissi 2010). Within this two-handed process between individual self-disclosure and collective affirmation or negotiation lies the question of identity that is often central to these approaches (cf. Balsam 2009; Georges 2009; Nosko et al. 2010; Richard 2010; Authenrieth and Neumann-Braun 2011; Wendt 2014).

On the other hand, a technological-pragmatic dimension of sign processing opens up the perspective to the relationship between SNSs as visual interfaces and collective networks, as well as the production of images through technological devices. These publications consider the forming of a sign and the shaping of its practical use through technological devices (cf. Sonesson 1999; Nightingale 2007; Van Dijck 2008; Lehmuskallio 2009 & 2012). In both perspectives, visual signs are considered as secondary phenomena to visual communication on SNSs. The use of technology to shape the image of the self, as well as the social interaction via visual signs, takes the spotlight here. Therefore, the aforementioned research often focuses on specific genres of visual semiotic resources of SNSs, which are seen as 'typical' for online communication of the self – such as digital photographs or the sub-genre of selfies.

The heterogeneity of visual signs on contemporary online platforms, as a result, has been neglected. First of all, the Internet is – at least in the era of Web 2.0 – conceived as a meta-medium: promoted through the concept of *user generated content*, SNS users simply share any kind of mediated pictorial sign on their SNS profiles and newsfeeds. Hence, visual communication on Facebook, for example, is not limited to genres that appear to be typical for the Internet, but also includes already existing visual signs that were previously common for other media: On SNSs like Facebook, one can find scanned or digitized versions of artistic paintings³ and 1940s' advertisement posters,⁴ information graphics,⁵ caricatures⁶ and journalistic photos from newspapers,⁷ technical visual communication like photos of construction and architectural models,⁸ scientific images,⁹ stills from moving-image formats like cinematic films or television news broadcasts,¹⁰ personal drawings,¹¹ scanned analog family photography and digital amateur photography,¹² as well as mash-ups and collages of the aforementioned images.¹³ Furthermore, these do not even include the possibility of embedding videos from popular online video platforms like Youtube, as well as the various signs of visual communication that are not generated by users but are part of the interface itself.

Given this abundance of visual signs on SNSs, research must not only focus on images whose emergence is attributed to a narrow conception of SNSs' visual culture. As a means of self-disclosure through personalized profile pages on the Internet and of social interaction through a techno-imaginary network of other users (cf. boyd 2010), online SNSs are always, more or less directly linked to the 'offline existence' of an individual, and therefore to the visual media of this offline sphere. It is difficult today to explain the historic specificity and emergence of typical visual signs on SNSs. The aesthetics and production of selfies are revisited in advertisement posters and TV series, and the Internet's popular rage-face comics are transformed into street-art sticker campaigns. In a time of an explosive visual culture and the 'hypervisuality of everyday life in a digitized global culture' (Mirzoeff 2002: 4), images are not essentially linked to only one medium or to one media-related space (offline vs. online).

Furthermore, in addition to the earlier research concerning questions of identity and technological processing, semiotic analysis may also concentrate on the interrelations between the pictorial sign, its processing and reading, the online SNS as a concrete medium that is accompanied by technological and cultural codes of use, and the individual user who is embedded in a networked collective of multiple users. Such an approach allows, on the one hand, a respect for the heterogeneous character of mediated pictorial signs and, on the other, that everyday life's visual communication is not reduced to a matter of mere identity-construction.

A techno-semiotic approach to pictorial signs on SNSs

The present study reconsiders the form of online visual signs in view of their processing through technology and their embedding into online graphic interfaces. Provided that the user's only technological access to the SNS is located on the layer of its graphical interface,¹⁴ technical action on SNSs mainly consists of the interaction with the semiotic contents and elements of this interface. Thus, as danah boyd (2010) states, the interface of an SNS is based upon the interrelations of two networks; on the one hand, an imaginary collective of users which is created through functions of connection¹⁵ and communicational action between users¹⁶ that is a technical feature of the interface. Additionally, this symbolic action establishes, maintains and manages a network of linked computer terminals. Therefore, from a semiotic point of view, we must consider visual signs on SNSs as processed signs – signs that are treated within media as machines of symbolic worldmaking (cf. Winkler 2010: 7). They are technically produced, modified, augmented, and translated. The layers of media technology can thus be conceived as 'process chains through which signs are from station to station constantly transformed [...]'(10). We might then ask in which technological layers the signs are transformed and shaped.

Following Gilewicz and Allard-Huver (2013), an analysis of technologically conveyed signs must take into account their technological embedding. It must therefore also analyze the media-related sign production conditions and 'describe the technical apparatus and the system by which it is produced'. The media-related level of a semiotic resource also leads to the rather pragmatic dimension of the 'process by which it came into being' (219) and how it is enunciated. Both dimensions, the technological, media-related account and the production and distribution of the semiotic resource, have a clear impact on the content and the collective reading of a message.

The concrete production and distribution of online semiotic resources must be considered as a semiotic practice, an individual semiosis, that is performed on the SNS. These practices involve material objects and artifacts – or, regarding sign practices on SNSs, the concrete software and hardware structures of the online interface. Meier and Pentzold (2012) state that multimodal online communication may be seen as an enactment of social practices. To analyze this enactment, one must refer to 'how communicators choose, form, design, and combine signs (based on the social semiotic ideational, interpersonal, textual metafunctions)'(9). A techno-semiotic approach to still photographs on SNSs, then, must not only take into account the chosen images themselves but also the technological performance behind their publication and distribution.

Hence, the technological and practical levels of image analysis must be added to Barthes' (1977) denotative, connotative and linguistic dimensions of semiotic analysis. This means including reflections on the medium's ideological, technological and pragmatic structure in order to understand the meaning of SNSs' still images. This also allows a discovery of the essential differences between them and pictures published in other media, like images in mass media or photographs in private albums.

Picture production and distribution on SNSs

Pictorial signs published and circulating on SNSs originate from different media, both on- and offline. It is a common feature of digital images as discrete signs that they may easily be copied to local hard discs and republished on websites. On SNSs, this can be done by embedding pictorial signs through copying the URL. Sites like Facebook give an automatic view of the picture when the URL is copied into a text box and even encourage users to 'share' visual content from other websites with other network members through a 'share on Facebook' function that is embedded on websites like news sites and other popular media.¹⁷ Those pictorial signs are thus created by other producers, such as professional graphic designers, photographers, scientists, etc., but also by other 'amateur' users for their weblogs, for example. Images that are published in this way through embedding do not differ from their initial form and are not modified.

When it comes to the user producing (his or her own) digital image signs, we can distinguish between two procedures: First, the digitalization of an existing analog image can be done through media technology like digital cameras, scanners or sensors. And second, it can be done through the production of a digital image by means of peripheral media technology that is embedded into terminal technology (webcams or front-facing and rear-facing cameras in smartphones or tablet-PCs) or that can be connected to the hard drives of terminals (external digital cameras). Integrated devices are often directly linked to editing software and publishing features, as is the case with the Instagram app.

The next step in technological image processing is to be found on the layer of the graphical SNS interface. The interface structure of SNSs often provides a rigorous technical code that clearly states which kind of content may be embedded. In the case of images, this often involves restrictions in format and size.¹⁸ The embedding process into the SNS interface is intuitive, with easy browsing of images on the hard disc and even the submission of several images simultaneously.¹⁹ Finally, the embedding of pictorial signs into SNSs' graphic interfaces is highly standardized. Input boxes define the location of signs in the individual user profile and the newsfeed. The most common boxes are the profile picture, which is most commonly situated in the upper left-hand corner, shared and uploaded pictures as 'news' that are embedded into the activity feed underneath, and prepared content boxes for picture albums that are to be found in 'photo' or 'picture' sections.

The user's choice of placement and enhancement of the image with linguistic content - through titles or comments - is, at this stage, a final potential action in the processing of the pictorial sign. The technical transmission of pictorial signs between the stages in the semiotic process chain is heavily programmed. But, image processing on SNSs depends not only on individual content transformation and technological code structures. Once published in the SNS, visual signs are distributed by the network's collective of users.

As with all other content on SNSs, a pictorial post can be commented on by other users, either in textual form or by using the 'like' function.²⁰ This quasi-symbolic technique allows the expression of emotional responses to content.²¹ On the other hand, pictorial signs may be recontextualized via collective action: One can share the pictorial content of another user on his or her content feed (which is similar to sharing external online content and embedding it into the SNS), or embed a link to another user into the picture. The linking function was initially enabled by Facebook to highlight other SNS users who are visually present in photographic pictures, but now also serves to distribute the image by linking a maximum of other SNS users that are not visually present.

With the collective sharing, comments, affirmation and linking of the pictorial sign, visual content may be dissociated from its original producer's profile and become a part of the intersubjective structures of the network. This collective sharing of content as dissociation from individual sign production is an inherent feature of SNSs: Pictures are embedded in other profiles, groups and other sites on the SNS and therefore gain an augmented social visibility. Danah boyd addresses this issue as the scalability of content on SNSs: 'Technology enables broader distribution, either by enhancing who can access the real-time event or widening access to reproductions of the moment' (boyd 2010: 47). Visual content, therefore, may become 'viral' and be processed and spread by a multitude of different users as an infection of large parts of the network.

Processes of collective reception, affirmation, commenting and sharing of visual signs remain engraved as a trace in the sign itself. Hence, the pictorial sign is not limited to its primary frame, which is the boundary between the iconic sign and linguistic and other symbolic content. The secondary frame embraces the picture itself, but also traces of previous interaction through the sign, as may be exemplified in pictorial content posted on the Facebook profile of German newspaper TAZ (cf. Figure 1). Embedding and sharing visual content on the Internet is, therefore, not to be seen as an equivalent to copying digital pictures. If a picture is copied to a local hard disc and redistributed on a SNS, it may be seen as an actual novel sign without the inscription of further reading and commenting. But, a shared image also shows its historical readings which can be traced through the layers that lay outside the iconic level.²²

The production and processing of pictorial signs on SNSs is to be seen as a complex process that is shaped by the use of the graphic interface of SNSs and its technological features, as well as by the collective distribution of the sign. A concrete example of a class of images produced and published on Facebook during the Tunisian Revolution illustrates the consequences.



Figure 1. Collective sign processing on Facebook. Facebook profile of German Newspaper TAZ. <https://de-de.facebook.com/taz.kommune> (Publication date: 31.03.2015) [accessed April 1 2015]

Pictures, Flags and Likes

Between December 2010 and January 2011, Tunisian Facebook users discovered a significant change in the visual sphere of their inter-individual networks on the SNS. During the main period of protest against the repressive politics of dictator Ben Ali, many Tunisians changed their profile photo from an individual (self-)portrait photo or other pop-cultural images to a highly symbolic sign: The Tunisian flag with crescent and star was embedded into the most prominent and self-promoting image slot on the profile page. However, this image did not represent the Tunisian flag in its original representation. Before the president's escape on January

14, 2011, Tunisian Facebook pages were overwhelmed with flags colored black or surrounded by solidarity hands, as shown in Figure 2 taken from a paper by Tunisian researcher Kerim Bouzouita (2011: 156).



Figure 2. Screenshot of Tunisian Facebook user's profile photos in January 2011. Bouzouita (2011, 156)

Bouzouita points out that at this moment in the revolution, Facebook provided one of the only public spaces with free access and potential freedom of expression in contrast to the urban public spaces that were paved with visual representations of the regime's power, and to the mass media that was controlled by Ben Ali's government (148ff., 156). Primarily, this visually 'hacked' representation of the national flag was for many Tunisians the starting point for a revolutionary engagement. The initial symbol of state power was transformed and linked to individual online personae in order to elaborate an alternative political stance (156f). Hence, Bouzouita situates this pictorial practice of bricolage and appropriation of the national symbol as an act of 'semiotic guerilla' (157).

Bouzouita's consideration not only relies on the mere denotative level of those graphic images on Tunisian Facebook. It is also the outcome of a techno-semiotic account that focuses on the pragmatic or practice-related dimension of pictures on SNSs. Under closer scrutiny, this example reveals the inherent specificity of the online still images.

Semiosis and multimodal inscription of user practice

When it comes to understanding the semiosis of pictorial signs on SNSs, the previous description clearly shows that the different content layers of pictures are shaped not only by individual transmission, but also by technological means and collective use, as well as manipulation of the circulating image. The picture appears to consist of different semiotic layers that interact with one another: Beyond the iconic content of the pictorial sign itself, we find linguistic content in titles and comments on the image; there are several techno-symbolic (quasi-automatic and hypertextual) signs, such as the linking of other users and the 'like' function, and we may also recognize the history of the image's circulation throughout the network by analyzing its sharing options. These layers combine traces of the image's reading by other users with the multimodality of the actual sign.



Figure 3. Timeline photo Med Freeman Creations, January 13 2013. <https://www.facebook.com/MedFreemanCreations> [accessed April 1 2015]

As we can see in the example of Tunisian media activist Med Freeman (Figure 3), the prominent flag theme has been widely transformed. The user added a hand symbol to the flag that – together with the added title ‘impunity?’ – accuses the politicians responsible for the deaths of the revolution’s martyrs of having evaded prosecution. Together with the image description underneath, the image calls for a demonstration to fight for the rights of the martyrs’ families. What enhances here the initial denotation of the picture is its’ enhancement through technological features, such as adding a link to the demonstration’s webpage, writing an image description and linking a group of activists directly in the picture. On the other hand, on the distribution side, the picture was ‘liked’ by 16 persons and was shared 19 times.

We can therefore distinguish between a historic-pragmatic level of reading the image and an actual interpretative reading of it, even though both closely interact with one another. Viewing how many users have ‘liked’ or shared pictorial content or reading the user comments on it shapes the reception of the image itself. Likes, shares, and the volume of content not only express the popularity of an author or producer of content (cf. Alby 2007: 112), but also the popularity and predominant importance of any particular visual content. Comments on the image may reveal the ‘hidden’ meaning of the image by contextualizing, framing, or explaining the content. In the example, one user criticizes the pictorial message’s intention by saying that ‘it is

their right [not to be judged]: This extra-content to the picture is partly inscribed into the picture frame and therefore highly visible.

In this perspective, the semiosis of pictorial signs on SNSs must also be analyzed as a process that is shaped by the discrete technologically programmed processing of the sign. Nöth (2009) suggests discussing this technological shaping of the picture as a machine semiosis. Digital processing reduces the Peircean notion of semiosis as a triadic process to a merely dyadic one as quasi-semiosis: The position of the denotation or object of the sign is left out. Semiosis in machines does not require an object of experience (cf. 84f). Therefore, technological sign processing is mostly conceived as a functional treatment. Functions like 'likes' or links do not by themselves play a referring role, they serve first and foremost the inherent network structures of the SNS.²³ And yet, these processes of machine semiosis also reduce the polysemy of the pictorial sign: On the one hand, we can consider this quasi-automatic processing in its symbolic social function, when 'likes,' links or comments on a picture create what boyd calls 'imagined audiences' (boyd 2010: 49) or imagined network collectives. Those imagined collectives serve as addressees to the communicative function of a conveyed picture. In the case of Med Freeman, the author aims his communication at a network of political activists who are directly linked in the picture. On the other hand, the implemented functions have material and pragmatic consequences on pictorial communication by creating real networks of audiences that have access to the picture and can therefore read it. This can be clearly seen when a highly symbolic graphic is used to call for participation in a demonstration, as in the example given.

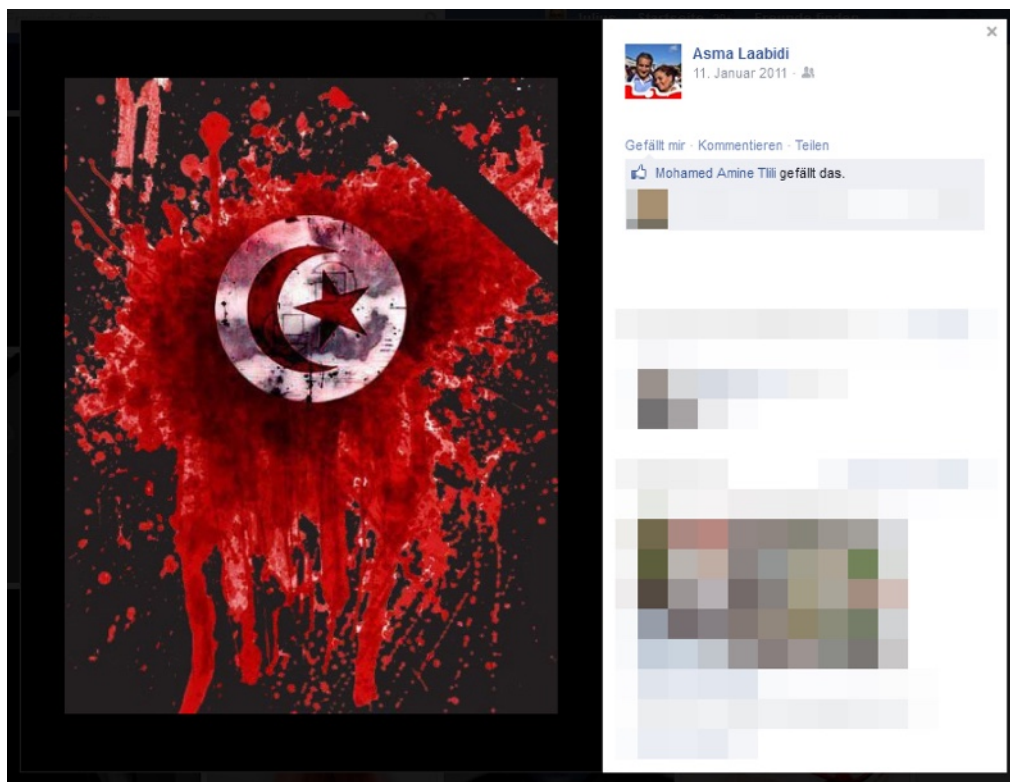


Figure 4. Profile Picture A. Laabidi, January 11 2011. <https://www.facebook.com/asma.laabidi404> [accessed April 1 2015]

Pictorial narrative and the self in SNSs

Visual communication does not have only a representational function. Kress and van Leeuwen (2006) point out that, particularly in multimodal communication that has a pictorial core, pictorial signs are to be seen as having three metafunctions: Apart from their representational dimension, pictures also have an interactive and a compositional (textual) metafunction. When it comes to the embedding of pictorial signs into the SNS interface and the inscription of user practices, we consider the pictures within the larger framework as a 'modal ensemble' (Kress 2010: 28), a formation that constitutes a larger ensemble of intermodal structures and thus forms a closed text.

The choice of posting the graphic of a transformed Tunisian flag in January 2011 as a profile picture is not only to be seen as an act of mere aesthetic communication. When Facebook user A. Laabidi publishes a picture of a blood-covered Tunisian flag with dripping edges (Figure 4), the symbolic resources of this image become part of her individual self-narrative, telling viewers that she is mourning her beloved country. The picture is an element of her individual one-to-many communication action that is linked to the online-persona and contextualized in the situational anchoring of the user between her online and offline identities. The concrete function of these visual self-narratives depends on their position in the SNS's interface.

A picture that is chosen to be the profile picture is static and directly linked to the identity of the online user. It creates a constant avatar that represents the user's 'face' on the SNS and is thus perceived as a pure self-display. Those pictures are always viewed when the user's profile page is opened. Laabidi therefore designs her online face by choosing the Tunisian flag theme with an emotional and critical connotation. This point is crucial, as the publishing practice of Laabidi shows that she actively chooses the modal option (using a picture instead of a text and publishing the picture as a profile photo) in order to create a message. Pictorial practices on SNSs become a matter of design in the sense of Kress (2004), as a 'choice in context' that asks, 'what, in this environment, with this kind of audience, with these resources that are available for implementing my design, given these social, economic, 'political' constraints, and with my interests now at this moment, is the best way of shaping that which I wish to make, whether as 'message' or as any object (of design)?' (116). The choice of a mode and – on a larger scale – the practice of publishing a picture are therefore part of a rhetorical process that also tells something about the actual context of the picture.

For Tunisian Internet user A. Laabidi, this becomes clear when we consider the characteristics of SNSs as sign stocks of individual representation: A closer look into her profile photo album gives an insight into the diachronic narration structures of the user's profile photos. Until the end of January 2011, Laabidi's profile narrative was highly determined by the presence of the Tunisian flag theme in different pictorial realizations (Figure 5). On the one hand, we can suppose that her national identity and her individual belonging to the state was an important issue at this time, which was shaped by the people's political uprising but also by political uncertainty.

This reading of the pictorial sign as 'being there' can be seen on different levels: In general, every semiotic resource published on SNSs shows that there might be an active user who designs his or her online presence. Pictures are further perceived as a form of increased authentication – visual content must be actively chosen in order to respond to the concrete socio-cultural context of the user. The pictorial content can then reflect in a more or less realistic mode the everyday life environment of the user (cf. Erdmann 2013: 146). Furthermore, the pictorial content may represent the user herself, as another profile photo of Laabidi shows (Figure 6). In this photograph, Laabidi performs a quasi-indexical authentication of self by using photographic technology. Furthermore, she uses the photograph to enact a perfect self-staging that includes highly symbolic signs like the Tunisian flag theme and an emotional gesture towards another friend.



Figure 5. List of profile pictures A. Laabidi, January 2011. <https://www.facebook.com/asma.laabidi404> [accessed April 1 2015]



Figure 6. Timeline photo A. Laabidi, May 20 2012. <https://www.facebook.com/asma.laabidi404> [accessed April 1 2015]

This reflects the interactive meta-function of pictures on SNSs as stated by Kress and van Leeuwen (2006): Self-representational pictorial discourse on SNSs always serves as an authentication as well as an idealization of the self towards another person or a collective as an imagined audience. Both levels of discursive function are no longer inscribed in the picture itself as features of indexical or iconic signs.²⁴ As a reply to the ongoing discussion of the realistic matter in digital photographs, William Mitchell points out that the question of indexicality or non-indexicality is not a feature of the mere 'essence' of a picture. A picture has a realistic function if it is meant to be realistic. The assertive function of pictures depends on the relevance and purpose that are given to them (cf. Mitchell 2007: 245). Or, to put it in semiotic and, more specifically, in Umberto Eco's terms, 'every image is born of a series of successive transcriptions' (Eco 1982: 34).

In this account, we have to situate the semiotic function of pictorial signs on SNSs in the relation between picture and context, which is the presence of an individual network user in light of his or her self-disclosure to the network. When a pictorial sign is perceived as an indexical trace of the depicted SNS user, when it is perceived as an iconic representation based on similar features of an object or person that belongs to the living environment of the user, these attributions are deeply rooted in the perception of semiotic agency on SNSs as a representation of everyday life.

It may appear rather simplistic but, as shown previously, the elementary cognitive conception of SNSs is based on the concept of quasi-authentic self-representation in order to maintain a functioning interaction between users of the network. After all, representation of personal everyday life contexts is the ideological basis of SNSs.²⁵ The relation between pictorial content and individual users' presence has thus to be conceived as a symbolic relationship: Pictures are related to the online persona with respect to the SNS's own conventions of use. These conventions are not an artificial creation of the platform's owners. They are products of collective affirmation or negotiation and thus part of the culture of the SNS.

Networked Culture

Cultural structures of SNS use are created in the interrelations between the technological features of the user-interface on the one hand and the individual and collective sign processing on the other. They are therefore shaped by inherent technological code structures and self-narrations of the SNS and by the secondary cultural context (language, perceptions, meanings, emotional and normative codes) (cf. Banse and Hauser 2010) of its users.²⁶ It is difficult to give a general characterization and definition of these media cultures and their dominant sign practices.²⁷ The dominant pictorial sign structures that are elements of SNS cultures have been described as 'regimes' referring to Foucault (Reichert 2008), as 'transnational pictorial systems' (Müller 2013), or as an autonomous code in terms of a 'new universal visual language' (Manovich and Tifentale 2014).

Pictorial sign regimes cannot be characterized with regard to their stability, rigidity or differentiation. For example, the dominant aesthetics and pragmatics of selfies as described above are today a global phenomenon that has spread across generations and territories. However, the iconic features of selfies are subject to constant changes, for instance, when new peripheral devices are introduced to the initial technical practice of image-making. The selfie stick, as a technological extension of the selfie arm, allows the turning away from self-depiction to taking a collective self-portrait.

The inherent characteristics of social networks play an important role in the generation of dominant visual representation practices. Due to the feature of scalability, the potential for increased visibility of content on SNSs (cf. boyd 2010), visual concepts may spread rapidly from actor to actor within the network and create a 'viral' phenomenon. Representations can become viral with regard to their visual content. This is the case for the Tunisian flag theme which offers visual clichés or 'visiotypes' (cf. Pörksen 1997) that can be assembled into an individual discourse about the self and its political position during the Tunisian Revolution. However, the dominant cultural code of pictorial sign production not only focuses on its visual elements. It may also refer to

the dominant aesthetics of visual resources at a given moment – for example, the predominance of different shades of red in Tunisian graphics from January 2011 on (Figure 5).

These dominant pictorial systems limit the polysemous discourse of pictures to unified categories of representation. What remains, then, of the potential of polysemous discourse as stated by Stuart Hall for negotiating or refusing the ‘dominant cultural orders’ and their ‘dominant or preferred meanings’ (Hall 2001: 57), when the regime of representation is partly engraved into the technological conditions of image production? Reichert’s suggestion is to conceive individual amateur sign processing as a productive action that has the potential to transform technologically shaped sign regimes by appropriating content on SNSs (cf. Reichert 2008: 28). Amateur image production and sharing, therefore, must be located on the thin edge between structures of techno-semiotic power structures and subjective media appropriation. These processes of subjectification largely depend on collective negotiations, not only of sign content, but also of the use of SNSs to transmit, produce and receive pictorial signs. The interrelations between technological interface structures, individual appropriation of pictorial content on SNSs and collective processing of visual signs in the networks can therefore be analyzed as a dialectical structure: They create dominant sign regimes but also imply their transformation. When Kerim Bouzouita (2011) states that the country’s dominant visual order before the fall of Ben Ali’s dictatorship was a representation of the leader and his power, then the use of pictures in the alternative medium of SNSs and the creation of new visual representations may show the emergence of a political counter movement. It is the transformation of sign regimes that covers political symbolic action.²⁸

Conclusion

In reaction to a lack of holistic semiotic approaches to still images on SNSs, the current study suggests that those semiotic resources be tackled in their double semiotic structure: as objects of an inter-individual communication and thus collective process of meaning-making, as well as objects of technological processing. In the first perspective, still images are embedded in collective networks of individual users who produce and reproduce pictorial signs, who comment on their reading of an actual sign and who attribute a group of addressees to it. In the second perspective, pictorial signs are part of a larger technological distribution process which determines the sources, technological contexts and thus the reception of those signs. Both sides interact, when collective readings are reattributed to the pictures and inscribed in their interface frame via comments, likes, links or sharing processes.

We therefore put our focus on the pragmatics of image processing which consist of enacted practices that follow technologically determined communication processes. This means that we can also consider these practices as a means to individual, and – through their contextualization in a collective network of users – social functions: Images on SNSs primarily serve as a means to self-narration as a dominant rhetoric in online social networks. They therefore reflect, on the one hand, the individual everyday life between online or mediated and offline spaces, and, on the other hand, they renew cultural collective patterns and contents. As was seen for the flag graphics of the Tunisian Revolution, a rather individual or self-centered narrative may therefore turn into a socio-political discourse, which (re)creates the public debate of individual belonging and citizenship through visual signs.

The proposed techno-semiotic approach can only provide a somewhat abbreviated account of the semiotic nature of pictorial signs on SNSs. On the one hand, the very complex interaction between the technological graphic interface and its components (like-, sharing-, embedding-, or comment-functions) and the pictorial content may become the object of further analysis. On the other hand, the materiality of the production of digital pictures (with new camera devices or SNS apps that quasi-automatically upload pictures to SNS interfaces) remains an interesting field of semiotic study.

Furthermore, an application of this first account of moving images and their embedding on SNSs may provide interesting insights. For those semiotic resources, the impact of the technological user interface is even stronger. To give one example, Facebook automatically starts videos embedded into a user profile. The video is replayed when the reader views it on his or her screen, but without sound. It remains to be analyzed how automatic screening influences the reading process of the video itself and, furthermore, the reading of the online persona of the user sharing the video. Even more interesting is the Facebook campaign for its 10th anniversary called 'A look back,' where the interface automatically generated a video with the most popular shared photos of an individual user – in order to create a visual history of the highlights of individual Facebook use.²⁹

NOTES

1. Selfies can be defined as photographic self-portraits that are made with a smartphone camera device and are quasi-immediately published on online social networking sites (cf. OD 2015).
2. Most examples cited by Saltz originate from Facebook, Myspace and Twitter.
3. Cf. Facebook Fanpage: 'Louvre Art ____ by Paris' ([https://www.facebook.com/pages/Louvre-Art ____-by-Paris](https://www.facebook.com/pages/Louvre-Art-____-by-Paris) [accessed April 1, 2015]).
4. Cf. Facebook Page of Kalamazoo Retro Posters Inc. (<https://www.facebook.com/kalamazooretroposters> [accessed April 1, 2015]).
5. Cf. Facebook Page 'Pinfographics' (<https://www.facebook.com/pinfographics> [accessed April 1, 2015]).
6. Cf. Facebook Page of Tunisian caricaturist Z (<https://www.facebook.com/pages/DEBATunisie/149229615135091> [accessed April 1, 2015]).
7. Cf. Facebook Page of German Newspaper Süddeutsche Zeitung (<https://www.facebook.com/ihre.sz> [accessed April 1, 2015]).
8. Cf. Facebook Page 'Architecture Models' (<https://www.facebook.com/architecturemodels> [accessed April 1, 2015]).
9. Cf. Facebook Page 'I fucking love Science' (<https://www.facebook.com/IFeakingLoveScience> [accessed April 1, 2015]).
10. Cf. Facebook Group Page 'Film Stills' (<https://www.facebook.com/groups/filmstills> [accessed April 1, 2015]).
11. Cf. uploaded artistic picture on the network for artists Deviantart. (<http://www.deviantart.com/browse/all/traditional/> [accessed April 1, 2015]).
12. Cf. Facebook Group 'Vernacular Photography' (<https://www.facebook.com/groups/vernacularphotography> [accessed April 1, 2015]).
13. Cf. Facebook Group 'Collage' (<https://www.facebook.com/groups/collage.kr> [accessed April 1, 2015]).
14. Friedrich Kittler already states in 1991 that the development of computers and their operation systems tend to narrow the user's access to the code structures of computer-related, technical action. Technological refinement of microchips and the introduction of protected modes at the software level resulted in a closure of hardware and software structures (cf. Kittler 1991). The user only had to deal with the restricted interface of the PC. This may also be claimed for modern Internet data structures: Except for open-source websites, one has less access to the code layers of websites than in times of HTML static websites. Dynamic websites with java scripts, embedded videos and other applications create a dominance of the graphical interface. The interface has power and contains ideology (cf. Chun 2004).
15. This linking of users is often paraphrased with the metaphorical term 'friendship'. Cf. networks such as Facebook, Jappy, Myspace.

16. This is mostly achieved through the individual communication in news or articles which are published on the activity protocols of other users or through the linking by other users in their respective content contributions.
17. Cf. The 'social plugin' functions of Facebook. <https://developers.facebook.com/docs/plugins/share-button> [accessed April 1, 2015].
18. E.g. in Facebook, upload is limited to JPEG, BMP, PNG, GIF or TIFF files under 15 MB, (<https://www.facebook.com/help/167931376599294> [accessed April 1, 2015]), while in the SNS for artists, deviantart.com, size limits are 30 MB and almost every file type is accepted (<http://help.deviantart.com/39/> [accessed April 1, 2015]).
19. For its smartphone app, the SNS Facebook takes it one step further and permits automatic syncing for photos on the mobile phone as well as an automatic enhancement for photos that 'improves the photo's lighting, clarity and shadows' (<https://www.facebook.com/help/118731871603814/>, [accessed April 1, 2015]).
20. The like-button is an essential function of Facebook. In other SNSs, it is replaced with a heart symbol (e.g. VKontakte).
21. But to 'like' content can also mean to express sympathy, (sexual) attraction, empathy, affirmation, or to use it as a marker for communicative turn-taking.
22. For a further reading regarding the complex interactions between iconic sign, collective processing and individual representation in Internet memes, cf. Goriuneva (2013).
23. For further remarks on the semiotic functioning of links and tags on the internet, cf. Huang & Chuang (2009).
24. If they had ever been.
25. Facebook presents its primary purpose as follows: 'Founded in 2004, Facebook's mission is to give people the power to share and make the world more open and connected. People use Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them.' (<https://www.facebook.com/facebook/info> [accessed April 1, 2015]).
26. For further reading on the secondary code of culture and its impact on user behavior and pictorial sign processing on SNSs, cf. Erdmann (2015).
27. In the first instance, this difficulty results from the general close entanglement between media, signs, culture and individual cognition in the sociocultural construction of reality. For further readings from a constructivist point of view, cf. Schmidt (2000).
28. To discover a more elaborate analysis of new forms of visual and symbolic protest on SNSs, see Erdmann (2014).
29. Cf. Facebook's information regarding the 'Look Back' experience (<https://www.facebook.com/help/206982576163229/> [accessed April 1, 2015]).

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Semiotics of spreadability: A systematic approach to Internet memes and virality

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The paper proposes a semiotic approach to Internet memes, a discursive domain that, although it represents a key and growing form of literacy, has so far been largely ignored by semiotics. Since the early 2000s, 'Internet meme' has referred to a wide range of culturally shared pieces of media circulating over the Internet, such as catchphrases, funny captioned pictures, and so-called 'viral' videos. Internet memes are 'spreadable'—they are effective, dismountable, customizable, and replicable. From a semiotic perspective, they are different kinds of texts that circulate thanks to a hypertextual dissemination; namely, through a process of transformation (samples, remixes) and imitation (remakes). Their syntax displays structures that mirror their creators' different operations of manipulation (bricolage) and that serve as a hook to users' agency, inviting them in turn to spread, modify or re-create the text. At the semantic level, despite the variety of themes and figures they carry, they all feature a striking element (punctum), usually a playful one (an incongruity, a 'mistake'), which serves as a hook to users' engagement.

KEYWORDS Hypertexts; Internet memes; Semiotics; Spreadable media; Viral videos

Introduction

Surprisingly, some key Internet-based textual practices, which are widespread and pervasive, have been almost completely ignored by semiotics. This is largely due to their relative novelty and to their complex and challenging features. The latter, in fact, pose the problem of a rigorous definition of the objects themselves as well as of the choice of a suitable way to collect and analyze them.

As Massimo Leone (2011) suggests, in order to dispel the risk of being nothing more than a 'micro-sociology' of the 'new technologies', a proper 'semiotics of the new media' should consider the Internet and social networks not so much as a 'mirror of society', but as an autonomous system with its own specificities (the modes of creation and diffusion of the contents they generate) existing in dialectical relation with 'offline society' (in a mutual exchange of forms and contents). Society does appropriate social networks—as a tool, an environment, a discursive dimension, and a proper linguistic system. Among these new, Internet-based linguistic systems, Internet memes are one of the most interesting and important.¹

Internet memes: An overview

The notion of 'meme'

'Meme' (pron. /'mi:m/) is a neologism coined by the English evolutionary biologist Richard Dawkins in his book *The Selfish Gene* (1976), aimed to identify the 'new replicators'—namely, non-biological, cultural replicators. The word 'meme' is an abbreviation, modeled upon the word 'gene', of 'mimeme', from the Ancient Greek *μίμημα* ('imitation, copy'; whence 'mimetic' and 'mimicry'). According to Dawkins, the meme is 'a unit of cultural transmission, or a unit of *imitation*', in other words, a 'cultural gene'; 'Examples of memes are tunes,

ideas, catch-phrases, clothes fashions, ways of making pots or of building arches' (2006: 192). Any unit of information that succeeds within a given social and cultural context, to become a model for textual production,² can be defined as a meme.

The idea that the 'atomic' elements of a given culture, understood as 'living structures', would propagate themselves from brain to brain (elsewhere Dawkins talks of the 'viruses of the mind', with particular reference to religion),³ just like genes do from body to body, and that culture as a whole follows an evolutionary development (in the Darwinian sense, just as in biological processes), is fascinating. This idea has set off a great debate in the scientific community, gathering both enthusiastic agreement and radical criticism, and launching 'memetics', a whole new discipline set in the perspective of cultural evolutionism (cf. Hofstadter 1985, Blackmore 1999).

As Paul Bouissac (2007) suggests, Dawkins' original statements left unclear whether the notion of 'meme' should be meant metaphorically ('weak hypothesis') or ontologically ('strong hypothesis'). Namely, whether memes should be broadly considered as 'units of imitation (that is, whatever can be imitated and consequently can spread both vertically and horizontally to form cultural assemblages endowed with various degrees of inclusive fitness for the individuals and cultures that foster these particular memes)' or as:

autonomous agencies who replicate on their own in brains (in the form of algorithms or cellular automata who take over the resources of the brains they invade and manipulate these resources for the sake of their own reproduction through replication irrespectively of the well being of their hosts). (Bouissac 2007: 2)

Daniel C. Dennett (1995) insists that the ontological status of memes is still open to question and, according to Bouissac, the strong hypothesis 'has not been yet the object of a serious scientific inquiry' (2007: 3).

Memes and signs

Some of the most radical criticisms of Dawkins' notion of 'meme' have come from biosemiotics, a branch of semiotics that studies the production and interpretation of signs in the biological realm. Terrence W. Deacon (1999, 2004), Kalevi Kull (2000), and Erkki Kilpinen (2008) maintain that the notion of 'meme' is heuristically useless, being nothing more than a 'weak double' of the notion of 'sign', emptied of its triadic nature ('sign or representamen', 'object', and 'interpretant', according to Charles S. Peirce), and capable only of being replicated. Consequently, memetics appears to be heuristically useless as well; furthermore, its epistemological assumptions seem to widen the gap between 'nature' and 'culture', whereas semiotics, and, in particular, biosemiotics and 'global semiotics' (cf. Sebeok 2001) seek to reconstitute this dichotomy. Following Yuri Lotman's theories, Kull (2000) highlights the translational nature of any process of information transmission, rather than that of copying or imitating (cf. also Latour 1986: 266).

Notwithstanding the above criticism the notion of 'meme' has been employed in semiotic studies (cf. Nöth 1995: 166, Volli 2003: 218-222) as a synonym of an 'efficacious and spreading idea, sign or text'; namely, it has been employed metaphorically, without endorsement of the holistic ideology of the memetic paradigm. Besides, Bouissac (1993, 1994, 2007) maintains that 'memes matter' within a semiotic perspective, since the eventual discovery of memes as ontological entities set in the brain might open the path to a new paradigm, 'evolutionary ecosemiotics' (2001).

Our purpose here is to assign to memes a proper heuristic value within a sociosemiotic perspective (cf. Floch 1992, Landowski 1999, Marrone 2001), by considering them as a specific type of texts circulating throughout social discourse. To this aim, we will invoke the most important contemporary inflexion of the notion, namely 'Internet memes' (cf. Shifman 2013), to identify both their specific features and those they share with other web-related textual phenomena.

Memes and the Internet

By the second half of the 1990s, researchers and scholars in the fields of cognitive and computational sciences (cf. Heylighen 1996, Best 1997, Marshall 1998) started to propose the idea of using memetics ‘as the basis for obtaining a better understanding of the Internet both in its operation and in the way it is used’ (Marshall 1998). The notion of ‘meme’ seemed ‘to explain what it is that circulates on the net’ (McKenzie 1996) or, at least, represented a ‘fitting metaphor for Internet culture, affording exact copies of digital artifacts, rapid person-to-person spread, and enormous storage capacity – a perfect storm of copy-fidelity, fecundity, and longevity’ (Marwick 2013).

Since the early 2000s, the use of the word ‘meme’ in relation to the Internet is no longer exclusive to insiders. *Wikipedia* registers the relation between Dawkins’ meme and the Internet for the first time in 2001 and, more extensively, in 2004⁴ (cf. also Hodge 2000). ‘Internet meme’ has been established as an umbrella term to identify a wide range of texts circulating in the Internet (‘phenomena specific to the Internet’, according to *Wikipedia*), such as ‘popular themes, catchphrases, images, viral videos, jokes’⁵ or, in other words, ‘culturally shared pieces of media’ (Constine 2009: 1).

Internet phenomena are memes according to folk taxonomy and in a metaphorical sense, as they are deliberately altered by human creativity; still, they present proper memetic features. Limor Shifman (2009, Shifman, Levy and Thelwall 2014) has studied Internet memes according to the principles of memetics, employing quantitative-statistical methods and proposing the idea of a proper ‘Web memetics’ (cf. also Coscia 2013, Quattrociochi, Caldarelli and Scala 2014). Dawkins himself has claimed that the Internet has ‘hijacked’ and substituted the original notion of ‘meme’ (cf. Solon 2013).

Early Internet memes

An indicative list of famous early Internet memes (namely, Internet memes defined as such, already established as ‘classics’ between 2004 and 2006)⁶ includes:

- *Dancing baby* (1996): An animated GIF of a disturbing 3D dancing baby;
- *Mr. T Ate My Balls* (1996): A website containing pictures of Mr. T – a character from the TV series *The A-Team* (1983-1987) – captioned with nonsensical phrases;
- *All your base are belong to us* (1998): A screenshot from the 1989 videogame *Zero Wing* displaying the sentence (a broken-English translation of the original Japanese one);
- *Emotion Eric* (1998): Pictures of a person imitating emoticons;
- *Hampster dance* (1998): A webpage completely filled with animated GIFs of dancing hamsters;
- *Yatta!* (2001): A comical song by the fictional Japanese boy band Green Leaves;
- *Star Wars kid* (2002): A video featuring a person imitating the *Star Wars* character Darth Maul (from the film *Star Wars Episode I: The Phantom Menace*, 1999);
- *Leeroy Jenkins* (2004): A video parody of the videogame *World of Warcraft*;
- *Numa Numa* (2004): A video featuring a person funnily lip-synching Haiducii’s cover version of the song *Dragostea din tei*;
- Pages from the satirical websites *The Best Page in the Universe* (1997) and *Real Ultimate Power* (2002) and the shock website *Goatse* (1999).

A brief chronology of Internet memes

Internet memes preceded the Web⁷, but globally they exploded outside of their native ‘Internet geek’ womb with the so-called ‘Web 2.0’, coinciding with the boom of social networks like Facebook and video sharing platforms like YouTube (both launched in 2005).⁸ More specifically, it is possible to talk of:

- **Proto-Internet memes** (1990s): At the dawn of the Internet as a social and cultural phenomenon, early Internet memes circulate via emails (e.g., chain-letters and virus hoaxes, such as the *Goodtimes* spread in 1994) and discussion groups on *Usenet* (wherein, in 1982, Scott E. Fahlman had created the emoticons, reported by some as the first example of an Internet meme; cf. Davison 2012).
- **Internet meme subculture** (late 1990s-2005): In a second phase, Internet memes circulate mostly via message boards, image boards, and personal blogs. The most important among the boards are by far *4chan*⁹ (a true memeplex – a ‘factory of memes’ – created in 2003 by 15-year old American geek Christopher Pool aka moot) and *Reddit*¹⁰ (created in 2005). *4chan* has set the standard for contemporary Internet memes.
- **Global Internet memes** (2005-): The third and latest is the ‘industrial’ and simultaneously ‘self-reflexive’ phase (still displaying subcultural traits). It is marked by the birth of social networks and their worldwide boom (2007-2010), and by the creation of Internet meme-dedicated resources; namely, thematic websites with structured galleries, usually offering semi-automatic tools for the ‘dummy-proof’ creation of memes as well. The most important among them are *I Can Has Cheezburger* (2007), *Memegenerator* (2009), *Quickmeme* (2010), and *Know Your Meme* (2008). The latter is a systematic census of Internet memes that collects, catalogues, and studies them using qualitative and quantitative-statistical methods.¹¹

Internet memes as a non-systematized field of research

Internet memes have not been systematically studied yet by any of the possibly pertinent disciplinary perspectives: philosophy, sociology, anthropology, linguistics, semiotics or, surprisingly, even memetics (none of the 45 articles published by the *Journal of Memetics*, established in 1997 and closed in 2005, concerns the Internet).¹²

In recent years, key hints have come from linguistics. Authors have analyzed the language employed by the Internet memes (cf. Zappavigna 2012) and specific memes (such as the *LOLcats*; cf. Gawne and Vaughan 2012, Fiorentini 2013), but still no systematic study on the topic has been produced (David Crystal, one of the leading Internet linguists, does not even mention Internet memes; cf. Crystal 2006, 2011), although general interpretations of the phenomenon, from the standpoint of sociolinguistics and pragmatics, have been proposed (cf. Blommaert 2014, Varis and Blommaert 2014).

Media studies, operating at the intersection of sociology, critical theory, ethnography, and marketing, is the most advanced area in the field. Key quantitative research and analyses (cf. Burgess and Green 2009, Berger and Milkman 2012), theoretical elaborations (cf. Metahaven 2012, Jenkins, Ford and Green 2013), and definitions (cf. Constine 2009, 2013, Davison 2012, Milner 2012) have been provided, as well as the best attempt at a general systematization to date (cf. Shifman 2013; on the basis of research started in 2007). Key contributions to a global understanding of the phenomenon have also come from literary and educational research (cf. Lankshear and Knobel 2003, 2007). A fertile point of departure for a semiotic approach to Internet memes can be provided by one of the most established typologies in the field of narratology; Internet memes can be studied as ‘hypertexts’, according to the terminology proposed by Gérard Genette.

Approaching Internet memes semiotically

Texts in contact: Transtextuality

Deepening the notion of ‘dialogism’, proposed in the 1930s by Mikhail Bakhtin (1981), and developing that of ‘intertextuality’, a neologism coined in 1966 by Julia Kristeva (1978), Gérard Genette (1997) shows that textuality is always a matter of ‘in-betweenness’, namely of ‘trans-textuality’. He identifies five levels of relation of one text to another, in order to define a model capable to explain how texts are generated and work as a system.

- **Architextuality:** The relation of a given text with texts that are similar to it, namely with pre-existing texts, considered as a coherent tradition (‘genre’ and ‘style’ are key notions in the architextual level of a text);
- **Intertextuality:** The relation of a given text with one or more that are included in it, according to different degrees of (a) allusion, (b) quotation, and (c) plagiarism;
- **Hypertextuality:** The relation of a given text with the one or more it has been derived from; the derivative text, namely the hypertext, may be generated through a process of:
 - **Transformation:** It is called (a) parody (if it is playful), (b) travesty (satirical), (c) transposition (serious; e.g., translation);
 - **Imitation:** It is called (a) pastiche (playful), (b) caricature (satirical), (c) forgery (serious).
 The hypertext implicates the knowledge of the original text, namely the hypotext (which, in this sense, is included in the derivative one);
- **Metatextuality:** The relation of a given text with the one or more it talks about, comments on, explains etc.; a review or a critical essay are typical metatexts;
- **Paratextuality:** The relation of a given text with its complementary elements, its ‘thresholds’ (cf. Genette 1989), namely – in the case of a book – its title, subtitle, cover artwork, footnotes, appendixes, illustrations etc.

The fact that a text may be manipulated and reused suggests that the more the text is made up by discrete units or blocks, the more it may be manipulated and reused. Umberto Eco (1977: 139, 1994: 157-158; cf. also Jachia 2006: 58-62) ascribed the success of a variety of literary and media texts (including the *Bible*, the *Divine Comedy*, and *Hamlet*) to their ‘incoherence’ (*sgangheratezza*, or the property of being unhinged), which ‘also means “dismountability”’ (Eco 1994: 157, *sgangherabilità*, or the property of being made unhinged). These texts, such as the ‘cult’ movie *Casablanca*, are dismountable, ‘endlessly deformable’, and their single components ‘become quotations, archetypes’ (Eco 1994: 158; my trans.). Eco maintains that the whole system of seriality (popular or genre fiction, comic books, TV series etc.) seems to be conceived to be dismountable.

Whereas Eco talks of a ‘block form’ that connotes texts as loose and non-structured (*senza forma*, or formless; Eco 1994: 158), Jacques Geninasca considers ‘modularity’ quite differently, nevertheless as something essential in the efficacy of a text. Geninasca talks of ‘serial syntagms’ to define a ‘coherent proposition that has the form of a finite series of terms, whatever its linguistic nature and dimension may be’ (1992: 16, 2000: 87; my trans.)—namely, to identify an autonomous text made up by smaller parts, and constituting a minimal, rhythmic structure. The notion of ‘serial syntagm’ has been fruitfully applied to music videos (cf. Peverini 2004) and digital media such as Web banners (cf. Polidoro 2002).

Transtextuality revisited: Replica practices

In the age of ‘digital reproducibility’ (to paraphrase Walter Benjamin), the categories of intertextuality and hypertextuality have been declined into a wide typology of digital intervention. It is possible to talk of ‘replica practices’ (cf. Dusi and Spaziante 2006), namely ‘shared procedures of invention, originated both from memories and textual archives, which embody consolidated practices of production and enjoyment inside texts

themselves' (Spaziante 2010: 5). These 'practices of reproducibility' or of 'digital bricolage'¹³ are epitomized in the sampling, the remixing, and the remaking. According to Lucio Spaziante (2007: 153-155), these three forms are characterized by different degrees of reinterpretation of a pre-existing text:

- **Appropriative reinterpretation (Sampling):** The extraction of a segment from a pre-existing text (Genette's intertextuality, quotation). If the text that includes the sample employs it at a structural level (such as in musical loops), it is possible to talk of a proper hypertextuality, of a hypertext and a hypotext (i.e., the pre-existing text that has been sampled);
- **Manipulative reinterpretation (Remixing):** The modification of a pre-existing text as regards one or more of its structural components (Genette's transformation). A musical remix usually modifies one or more of the following elements of the pre-existing musical text: voice, melody, single instrument's track, rhythmic patterns, sound spatialization etc. Remixing can be considered a hyponym – i.e., a specific type – of sampling, as the modification it implements involves, horizontally, the whole original text, and not only, vertically, one of its parts;
- **Reinterpretation proper (Remaking):** The re-creation of a pre-existing text, with no regard to its original matter of expression or medium (Genette's imitation). The cover version of a song or the adaptation of a novel into film (a case of 'intersemiotic translation' or 'transmutation'; cf. Jakobson 1959) are typical remakes.

Internet memes comprise a widespread range of popular practices of textual sampling, remixing, and remaking, and, as such, are powerful means of transmission of a wide range of social and cultural contents.

Semiotics of spreadability: A systematic perspective

Spreadability: A new paradigm for the new media

Henry Jenkins (cf. Jenkins, Ford and Green *op. cit.*; on the basis of research started in 2007) strongly questions the concepts of 'virality' and 'meme'. He rejects the unconsciousness and passivity these two terms implicate and assign to users—'viral contents' would 'infect' people (almost in a 'hypodermic-needle theory' fashion) and 'memes' would propagate autonomously (whereas Dawkins himself has stressed that they should not be considered as totally 'independent agents'). Even though 'virality' and 'meme' are evocative, potent concepts, Jenkins proposes to employ a more fine-grained category, in order to acknowledge users' agency (he has always been interested in the pragmatics of media and the active role of communities; cf. 1992).

The idea is that the textual practices identified by terms such as 'viral' and 'meme' owe their efficacy not so much to mechanisms of mimicry (cf. Blackmore 1998) or virality (cf. Dawkins 1993), but to the capability of stimulating the participation of users or, in other words, activating their agency. Such texts convey the idea of being manipulated and of creating other texts out of them. Internet memes are 'ergodic' texts (cf. Aarseth 1997), requiring active work by users: they need to be sampled, remixed, and remade.

Jenkins proposes to identify texts such as Internet memes with the category of 'spreadable media', where the neologism 'spreadability' should be understood as a 'metaphoric and multidimensional concept, ambiguously in between medium and content' (Boccia Artieri 2013: 330; my trans.). In fact, texts are 'spreadable' due to the interlacement of different, inseparable dimensions: intrinsic properties of the content as such, technological and communicative structures, economic structures, and online and offline social networks.

Theodor W. Adorno (1941) had already proposed a twofold model to explain the spread of popular music songs. On the one hand, he referred to 'standardization' (songs are built according to crystallized schemes that make them immediately recognizable as part of a given genre, namely a 'context of use'), which is related to structural and semantic features of the text itself. On the other, he referred to 'plugging' (in order to turn them into hits, songs are played repeatedly by radio broadcasts, are put into films, commented on by journalists etc.),

which is related to the technological, economic, and social structures involved in the transmission of the text (both in the case of what nowadays we call ‘top-down’ or ‘branded’ content and ‘bottom-up’ or ‘grassroots’ content).

The category of ‘spreadability’ identifies a new dynamic paradigm for the contemporary global mediascape, where a given content is spread via different platforms and formats, and can be customized¹⁴. This is in opposition to the traditional, static one of ‘stickiness’, conceived in a centralized, standardized, and broadcast-oriented system, where a given content is set in a single environment and aims at attracting users to it, building so-called ‘customer loyalty’. The opposition between ‘stickiness’ and ‘spreadability’ can be summed up as follows:

The Migrations of Individuals vs. the Flow of Ideas; Centralized vs. Dispersed Material; Unified vs. Diversified Experiences; Prestructured Interactivity vs. Open-Ended Participation; Attracting and Holding Attention vs. Motivating and Facilitating Sharing; Scarce and Finite Channels vs. Myriad Temporary (and Localized) Networks; Sales Force Marketing to Individuals vs. Grassroots Intermediaries Advocating and Evangelizing; Separate and Distinct Roles vs. Collaboration across Roles. (Jenkins, Ford and Green *op. cit.*: 5-7, 295-300)

As a consequence, in a content design perspective, ‘content is more likely to be shared if it is’: ‘Available when and where audiences want it; Portable; Easily reusable in a variety of ways; Relevant to multiple audiences; Part of a steady stream of material’ (Jenkins, Ford and Green *op. cit.*: 197-198).

Jenkins’ ‘spreadability’ recalls Jonathan Zittrain’s notion of ‘generativity’. A ‘generative system’ or ‘pattern’ is a means ‘designed to accept any contribution that followed a basic set of rules’ (Zittrain 2008: 3), and that ‘is open to reprogramming and thus repurposing by anyone’ (*ivi*: 19). In a generative system, like the PC or the Internet:

There are five principal factors at work: (1) how extensively a system or technology leverages a set of possible tasks; (2) how well it can be adapted to a range of tasks; (3) how easily new contributors can master it; (4) how accessible it is to those ready and able to build on it; and (5) how transferable any changes are to others – including (and perhaps especially) nonexperts. [*ivi*: 71]

The five factors, in other words, are: ‘leverage’, ‘adaptability’, ‘ease of mastery’, ‘accessibility’, and ‘transferability’. ‘The more these qualities are maximised, the more contributors can take part in the system, and generativity can develop and be sustained’ (Börzsei 2013: 10). According to Zittrain, generativity presents both positive and negative aspects, but its indiscriminate proliferation cannot lead to anything but technological, social, and cultural issues.

It must be noted that some of the early Internet memes (e.g., most of the webpages and websites listed earlier) are ascribable to the logic of stickiness (‘many-in-one-location’, according to Davison 2012: 125), rather than to spreadability (‘individuals-in-many-location’, *ibid.*). This suggests that the notion of ‘Internet meme’ is historically motivated, that it has undergone an evolution; most contemporary Internet memes, in fact, are definitely ascribable to the logic of spreadability.

An analytical definition of ‘Internet memes’

In common use, ‘Internet phenomena’, ‘Internet memes’ and ‘virals’ are indiscriminately employed as synonyms and, as such (namely, as folk taxonomies), they ‘lack even an accurate definition’ (Davison 2012: 122). In order to achieve such a definition and to provide a more precise research terminology, we may use the term ‘Internet meme’ to refer not so much to a *text* that virally spreads over the Internet, but to the viral spread of the

practice of modifying a text and producing other texts out of it. More specifically, we can define ‘Internet memes’ as follows:

- (i) They are texts,
- (ii) belonging to *different expressive substances*, and usually *syncretic*,
- (iii) deriving from a process of *intervention* upon pre-existing texts,
- (iv) according to *rules* of pertinence and good formation,
- (v) that are characterized by a collectively assigned and recognized *efficacy*,
- (vi) by a *playful* spirit,
- (vii) by the *anonymity* of the creator, and
- (viii) by modalities of diffusion that are repetitive, adaptive, appropriative, and – in general – *participative*.

Point (i) refers to the semiotic notion of ‘text’ as an ‘analyzable meaningful object’ (cf. Note 2). Point (ii) means that memes are multimedial or multimodal texts, usually pictures (static or animated, including verbal parts) and videos. Point (iii) refers to the processes of segmentation, modification, re-creation, and resemantization – namely, *bricolage* (cf. Note 14) – that are implemented in order to spread the memes (they are hypertexts, replica practices, textual samples, remixes, and remakes). The rules mentioned in point (iv) may be proper formal or procedural schemas; memes’ rules of formation are exhibited by their very structure. The playful spirit mentioned in point (vi) can be humoristic, parodistic (playful transformation; pastiche, in case of imitation), or satirical (travesty, in case of transformation; caricature, in case of imitation), and it actually comes from the efficacy (v) of the text, owed to the presence of a ‘striking element’. The features listed in point (viii), which usually make memes anonymous (vii),¹⁵ make it legitimate to classify them as ‘spreadable texts’.

It should be stressed that by ‘Internet meme’ we actually mean two different yet strictly related entities: an idea, a *type-meme* (or, in other words, the meme *genre*), and the object that materializes it, a *token-meme* (a *text*); the former generates the latter, and the latter recalls the former.

Type- and token-meme: The Happy cat

Internet memes are texts (token-memes) like the *Happy cat* (the picture of a grey cat who seems to be smiling dazedly, with the superimposed verbal text ‘I CAN HAS CHEEZBURGER?’; cf. Fig. 1), but also the format, the model, the set of criteria according to which that single text has been created (type-meme). *Happy cat* is the first established LOLcat (it is the text that inaugurated the genre, in 2007), which is a funny picture of a cat featuring a caption (usually in Impact font) written in ‘LOLspeak’ or ‘Kitty pidgin’ (a form of systematic broken English, as one can imagine a cat would talk; cf. Fiorentini *op. cit.*). Only such a text (the picture and the text as a whole is called ‘image macro’), displaying this structure and these features (the picture has to be a photo, not a drawing; it has to be funny, not sad etc.), is a LOLcat, and only a LOLcat. Otherwise, we can talk of a parody of a LOLcat, or of another Internet meme.



Figure 1. The *Happy cat* (2007). The original picture, uncaptioned, dates back to 2003.

The problem of typology

Lankshear and Knobel's (2007) self-declared 'provisional' typology identifies four main types of memes according to their purposes. The typology has been built on the basis of a corpus of 19 Internet memes, selected with regard to the buzz they generated across online communities and mainstream media, and is both thematic ('what do Internet memes talk about?') and pragmatic ('how can Internet memes be used in social discourse?'):

Social commentary (People concerned with displays of good citizenship; Tongue-in-cheek, socially-oriented, political critique interests; Social activist or advocacy interests); Absurdist humour (Music video clip, animation and movie parody interests; Photoshoppers; Absurd discussion forum post interests; Geek humor interests); Otaku and manga (Macabre interests); Hoax (Prankster interests).
[Lankshear and Knobel 2007: 218]

Limor Shifman (2013) provides a list of six common features concerning 'memetic videos', on the basis of a corpus collected with regard to 'YouTube's popularity measures of the top 100 "most viewed," "most responded," "most discussed," and "most favorite" videos, as well as user playlists of Internet memes' (Shifman 2013: 73): '[A focus on] Ordinary people; Flawed masculinity; Humor (Playfulness¹⁶, Incongruity¹⁷, Superiority¹⁸); Simplicity; Repetitiveness; Whimsical content' (Shifman 2013: 74-84).

With regard to ‘memetic photos’, Shifman claims they ‘share two prevalent features: image *juxtaposition* and *frozen motion*’ (ivi: 89; my italics). She also identifies nine major Internet meme genres: ‘Reaction Photoshops; Photo Fad; Flash Mob; Lipsynch; Misheard Lyrics; Recut Trailers; LOLCats; Stock Character Macros; Rage Comics’ (Shifman 2013: 99-118). Shifman adds that the ‘Meme Genres’:

Can be divided into three groups: (1) Genres that are based on the *documentation of “real-life” moments* (photo fads, flash mobs). [...] (2) Genres that are based on *explicit manipulation* of visual or audiovisual mass-mediated content (reaction Photoshops, lipdubs, misheard lyrics, recut trailers). These genres [...] may be grouped as “remix” memes [...]. (3) Genres that evolved around *a new universe of digital and meme-oriented content* (LOLCats, rage comics, and stock character macros). [Shifman 2013: 118]

Despite their great usefulness in identifying some key features of Internet memes, both Lankshear and Knobel’s and Shifman’s typologies cannot be considered ‘systematic’. They present a non-homogeneous segmentation of the memetic continuum, suggesting classes that actually focus on different levels of semantic pertinence and that could have been better organized in terms of hyponymity-hypernymity (in particular, some aspects that are strictly related have been categorized separately). Besides, a few assumptions seem pretty arguable (e.g., why should ‘Otaku and Manga’ topics express ‘macabre interests’?; many highly successful Internet memes do not display ‘a focus on ordinary people’, and many are far from being definable as ‘simple’ texts). Furthermore, because they are mainly focused on the semantic facets of the phenomenon, the typologies cannot take into account the different ways in which Internet memes are built, considering them, *de facto*, as a structurally homogenous set of texts (which they are not).

In fact, the structure of memes is a key dimension as it presents, *in nuce*, the more or less explicit instructions and the different possible operations users are allowed to apply on texts in order to use them concretely. In other words, structure is strictly related to the pragmatics of the texts. We may outline two different and complementary typologies of Internet memes; a *syntactic* and a *semantic* one.

Syntactic typology

Through the structure a meme displays, it is possible to infer the kind of agency a user is allowed and invited to implement in order to spread the meme itself; depending on the structure, it is possible to distinguish between different degrees of intervention, namely between different operations that can be implemented *upon* the meme and *on the basis of* the meme.

We may identify three syntactic macro-types within a memetic continuum of the Internet phenomena; with *ready-made* memes (and *spreader*-users) and memes that have *to be created on purpose* (and *creator*-users) at the opposite extremes, and whatever meme has to be *modified* to be spread set in the middle. We may call Genette’s hypotext as ‘source’ or ‘mother’ text, and hypertext as ‘target’ or ‘child’ text; each class of the typology includes both source and target texts, for the very nature of the memes lies in their inter-objectivity (a text is a meme to other texts, namely its source text and child text).

Three different ways of spreading an Internet meme can be identified. This is a pragmatic typology, with a focus on the perlocutionary dimension of the text; namely, on the level of the psychological consequences of the text and of the effect of getting someone to do or realize something. To paraphrase Northrop Frye (1957), we may talk of three ‘memetic radicals’:

- **Spreading** (sharing, copying, posting)
- **Transforming** (sampling, remixing, customizing)
- **Imitating** (remaking, re-creating, re-enacting).

Proper memes are texts that need to be transformed to be meaningful to the user; namely, they require a transformation of the source text to exist.

The following theoretical assumptions are mainly based on a corpus of both established and emerging memes – ‘the many as possible’ – labeled as ‘most popular’ in September-October 2013 by the reference website *Know Your Meme*¹⁹.

Ready-mades

These texts are memes at the ‘zero degree’, as they do not require any transformation prior to their use; they just have to fit a given context. They ‘travel’, they can be shared, posted, and commented on; they identify so-called ‘Internet clichés’ and, if they spread outwards (breaking the ‘tipping point’), ‘virals’. They present themselves to the user as ‘discrete’ (cf. Constine 2009), semantically full units. When generated by manipulation of a pre-existing text, the source text has been modified only once, and for all; albeit target texts may present variations that do not implicate any change in the meaning (cf. Fig. 2). They are ‘founder-based memes’, according to Shifman (2013: 58). Any possible text featuring a ‘striking element’ (cf. *supra*; par. 3.2) that circulates over the Internet can be seen as a ready-made spreadable text.

Prototypical examples: Emoticons; hashtags; catchphrases; Internet clichés such as *Facepalm*, *Rage faces*, *Bitch please*, *You don’t say?*, *True story*, *WTF*, *wat*, *It’s a trap*, *Swag*, *dat ass*; virals such as the *Susan Boyle sings* videos and the *Kony 2012* campaign.



Figure 2. Different versions of the Jackie Chan *What the fuck* (WTF) meme (2009).

Samples and remixes

These texts present themselves as an assemblage of different elements. Once the source text has been modified (once the sample has been extracted or the text has been remixed), the new text is spread as such. The manipulations of the source text can be additive or subtractive (the latter is the case with many Internet cliché ‘faces’ that are stylized; e.g., Nicolas Cage’s face in *You don’t say?*). Textual sample memes have actually two source texts; the one serves as a ‘background’, the other as the intertextual fragment constituting what we have called the ‘striking element’ (cf. *supra*). This is the case with ‘meme icons’, namely the figures and faces of recurring, highly recognizable characters that are pasted onto or inserted into pre-existing pictures thanks to Photoshop and similar photo-editing applications (cf. Fig. 3); the prototype of such memes is probably *Bert* (a Muppet from the *Sesame Street* show; cf. Börzsei 2013: 7-8).

Prototypical examples: Meme icons or character-based memes such as *Pedobear*, *Kim Jong-un*, *Potato Jesus*, *Disaster girl*, *Pepper spray cop*, *Jesus doing everyday things* (sample); photoshopped pictures in general (sample and remix); mashup videos such as the *Thom Yorke dance* or the *Songify* videos (remix); loop videos such as *Trololo* (sample and remix).



Figure 3. The *Pepper spray cop* meme icon (2011). At the top, the original photo.



Figure 4. The *Advice dog* image macro meme (2006).

An important sub-type of sample-remix texts are the ‘symbiotic’ ones (cf. Constine 2009). The source text features an explicit ‘formula’ (cf. Constine 2013) or ‘template’ (cf. Rintel 2013), made up by fixed elements and variable elements that have to be filled or modified (according to a ‘guided remix’ practice; cf. Fig. 4). The model text is modified (the variable elements of the template are modified) from time to time, in order to make the result suitable to a given context or purpose. A new symbiotic text is the modification of a pre-existing model symbiotic text of the same ‘species’; both the hypo- and the hyper- texts are symbiotic (we may define such memes as ‘cannibalistic’). These texts present themselves as structuring units of meaning, rather than autonomous semantic units. The presence of a more or less explicit formula or template is what makes it possible not only to *transform* pre-existing texts that display such structure, but to *re-create/imitate* pre-existing texts (cf. *infra*).

Prototypical examples: Formulaic catchphrases such as *Keep Calm and X* (coming from *Keep Calm and Carry On*) and *I can has X?* (from the *Happy cat*), or parodies such as *Berlusconi restituisce cose* (‘Berlusconi gives things back’); all the template image macros modeled upon the *Advice dog*, such as *Condescending Wonka*, *Scumbag David*, *Successful kid*, *Business cat*, *Philosoraptor*, *Socially awkward penguin*, *Overly attached girlfriend*, *Annoying Facebook girl*, *[10] guy*, *Sad Keanu* (Reeves), *Brace yourselves*; dubbed videos such as *Hitler reacts*.

The triadic structure of most of the template image macro memes (picture in the middle, caption at the top and bottom) makes them, according to Geninasca (1992, 2000; cf. *supra*, par. 2.1), a particularly effective serial syntagm. This is because ‘triadic serial syntagms’ display the most effective rhythmic structure, ‘the smallest form in which we are able to recognize the alternation of tension and resolution’ (Polidoro *op. cit.*: 189, my trans.).



Figure 5. The *Doge* meme (2013). At the top, the original template meme, at the bottom, a sample-remix/photoshopped picture.

Many Internet memes provide both icons and image macros. Figures such as Chuck Norris, *Grumpy cat*, *Doge*, and *Ridiculously photogenic guy* are both faces users stick onto pictures in order to resemanticize and refunctionalize them, and proper template memes that users engage in customizing. In *Doge*, on the one hand, the dog's head is pasted onto pre-existing pictures and, on the other, the original colored Comic Sans captions are substituted with new keywords (cf. Fig. 5).

Mimetic texts

These texts are imitational (Shifman 2013 employs the notion of 'mimesis' *passim*) because they remake a given, pre-existing text. They usually re-create the formula or template upon which the original text is built (namely, they are usually symbiotic; cf. *supra*). They can be 'performative' (cf. Banks 2011; cf. Fig. 6) as well,

being the result of what might be called a ‘memetic practice’, such as re-enacting the action shown in the photo or video that serves as the source text. Another typical memetic practice is *Rickrolling* (from ‘Rick’ + ‘trolling’); namely, linking the video of Rick Astley’s song *Never Gonna Give You Up* to a user who expects the disguised link to be a useful resource. The early Internet meme *Hampster dance* (cf. *supra*; par. 1.5) was employed in a similar way.

Prototypical examples: Photo fads such as *photobombing*, *planking*, *fingerstache*, *face masking*; thematic photo series such as the *LOLcats*; thematic selfies such as the *Pretty girls/ugly faces* and the *sellotapes*; reaction videos such as the ones to the infamous *2 girls 1 cup*; flash mob videos such as the ones derived from *Gangnam Style* and *Harlem Shake*;²⁰ response/parody videos such as the ones derived from the *Leave Britney alone* video; campaign videos such as the *Ice bucket challenge*; automatic generators of sentences mocking a given personality’s style.



Figure 6. An ‘attempt at “stocking” using a photo of an owl’ (from Banks 2011).

Remarks upon syntactic typology

The second syntactic category works by transformation (they are samples and remixes), while the third works by imitation (remakes). All but the first category, and particularly both the transformational and imitational symbiotic texts, can be interpreted, as we have seen, as serial syntagms introducing ‘a puzzle or problem that needs to be solved through creative responses’ (Shifman 2013: 97; Jenkins, Ford and Green 2013: 209-211) talk of an ‘unfinished content’. These memes can be modified *ad libitum* on purpose; they are ‘egalitarian memes’, according to Shifman (2013: 58). They set the *theme* or the *topic* of the discourse by themselves; they embed their own theme or topic. On the contrary, so-called ‘ clichés ’ rather serve as a *comment*, *rheme* or *focus* to the pre-existing theme or topic of the context (e.g., all the *Rage faces* or any text that is used as an emoticon, to express a feeling, a sentiment, an evaluation, a judgment).

In a static perspective, the three syntactic categories identify textual formats and single texts. In a dynamic perspective, they identify the phases of a possible process of hypertextual production, so that from the source

text – which serves as a ready-made – it is possible to generate the textual sample-remix, and from this the mimetic text (cf. Fig. 7). Each of them can, in turn, serve as a ready-made spreadable text, as exemplified by such texts as the mashup videos—remixes that, besides stimulating the production of other mashups, spread autonomously as Internet clichés or proper songs (e.g., the *Songify's Can't hug every cat* and *Reality hits you hard bro*).



Figure 7. *Charlie bit my finger* (2007, http://youtu.be/_OBlgSz8sSM), an example of hypertextual/memetic generativity: from the original photo, to the remix, to the mimicry (from Shifman 2013: 20).

An advantage of such a typology, which focuses on meme structure and on the possible material operations that are allowed upon the text (as the text has been created according to them), is that it leaves possible 'open positions' for memes yet to come, a possibility that thematic typologies cannot allow.

According to such a perspective, 'virality' stands as a sur-categorization. The notion of 'virality' implies that a given text quickly spreads outwards, but it does not involve any particular textual requirement, nor a manipulation of a pre-existing text. Not all virals are Internet memes (not all virals have a memetic structure) and not all memes go viral (not all texts that have a memetic structure go viral), even though it is easy to witness the two categories overlapping and hypertextual proliferation is a symptom of viral success.

In short: internet memes – second and third category proper – are different but usually syncretic kinds of texts, such as captioned pictures and videos, that circulate over the Internet thanks to a hypertextual spread (from the original token-meme, established as type-meme, to the token-memes), namely through a process of transformation (sample, remix) or imitation (remake). On the contrary, virals are texts that spread without any manipulation. Memes display different structures that mirror their creator's different operations of manipulation and, in turn, invite users to spread, modify, or re-create them in a similar way.

Viral vs. meme: First Kiss

First Kiss, a video²¹ directed by Georgian artist Tatia Pileva on commission by Los Angeles fashion brand Wren, is a case of successful viral marketing – uploaded on YouTube on March 10, 2014, it reached 47 million views in four days – that became a meme (type, model) by generating memes (tokens, variations). The format of the video (couples of 'strangers' meeting for the first time, overcoming shyness, and eventually kissing; black and white hi-definition photography etc.) constitutes its memetic structure (the meme as a textual model), while its parodies (*Firsthandjob*, *Firstsniff*, *Firstlick*, *First snog*; actually, pastiches and caricatures) and imitations (*First Kiss: i baci a Torino sono veri* ['in Turin kisses are true']; forgeries) constitute its memetic replicas (its hypertextual proliferation through mimetic-performative texts).

Semantic typology: Indications for a semiotic mapping

Following the tradition that stemmed from Jean-Marie Floch's four-valORIZATION (Practical, Utopian, Aesthetic-Playful, Critical) semiotic square (1992), namely Andrea Semprini's 'semantic positioning' (1993) and Guido Ferraro's 'discursive systems' (1999), it would be possible to outline the mutual positioning of each Internet meme through a semiotic mapping—namely, to place the possible Internet meme genres within a semantic perspective.

- **Thematic mapping:** A first semantic mapping may be focused on the themes carried by the memes; namely, any possible topic, issue or discursive area (e.g., 'food memes', 'sex memes', 'protest memes', and other topic-specific memes);
- **Figurative mapping:** A second mapping may be focused on the figures – 'actors', according to Algirdas J. Greimas' terminology – employed to figurativize such themes. It would be possible to identify individual or collective memes; namely, memes that are based on a main character (such as the *Advice dog*) and serial or categorical memes (such as the *LOLcats*).

It would be possible to connect the themes and figures mappings, as the same theme can be carried by different figures and the same figure can carry different themes. By connecting themes and figures, it would be possible to identify polarities (e.g., 'establishment vs. minority memes').

Thanks to such typology it is easy to highlight the critical points in Lankshear and Knobel's one; their 'Social commentary' indiscriminately includes practical and critical values, while the aesthetic-playful

valorization seems to be split into two different categories ('Absurdist humour' and 'Hoax', whereas the latter has critical nuances that would need to be made explicit). A semiotic typology allows to have a clearer view of the single types (e.g., 'Otaku and Manga' seems to fit a utopian valorization).

Punctum: The 'striking element' as a 'mistake'

With thorough analysis, it is possible to identify a unique element that holds a wide and heterogeneous set of texts such as Internet memes together. They always display a 'striking element', a *punctum* (cf. Barthes 1980), which is, *lato sensu*, a 'mistake'. The memetic category of 'mistake' encompasses everything from 'grammatical mistake' (such as the broken English of the early meme *All your base are belong to us* and misconstructions like 'Much noble, so respect' in *Doge*; *LOLcats* are entirely based on broken English), to 'ambiguity' (the 'impossible pictures' studied in Leone 2014), 'oddity' (*wat*, *Potato Jesus*, *Songify* videos, most image macros like *Condescending Wonka*), 'exaggeration' (*Rage faces*, *Overly attached girlfriend*, *Chuck Norris facts*, reaction and loop videos, *Hitler reacts*), or 'inadequacy' (*Ridiculously photogenic guy*, *Rickrolling*, *photobombing*), in aspect (Nicolas Cage's face stylized in *You don't say?*) or behavior (the inexcusable *Pepper spray cop*). In other words, this 'mistake' is everything that can convey the idea of 'incongruity', a classic mechanism of comedy (cf. Shifman 2013: 79-80; cf. *supra*, par. 3.4).

In the case of a proper meme, that is a derived text, the 'mistake' featured in the pre-existing text is selected, put under the spotlight, and spread. The source text's 'mistake' is the 'semantic hook' that catches the user's attention, making the text susceptible to memetic selection and dissemination; just like the prominent and peculiar physical features of a given public figure make him or her subject to parody and imitation. The bigger the 'mistake', the more whimsical the text is, the more the incongruity is evident, and the more the humorous effect is obtained. In other words, 'Never a failure, always a meme'.

As Shifman notices, many – if not most – of the Internet memes show a situation that, in origin, was 'unintentionally, or at least not clearly intentionally, funny' (cf. Note 18). In this sense, memes display a kind of 'post-irony' (cf. Maddy 2012). On the one hand, the irony they display is assigned *ex post*, it is a 'found irony'; discovered by the creator-user in the source text and perpetrated autonomously as the prominent element in the target text. On the other, due to such decontextualization, 'when that ironic reproduction is reproduced repeatedly, the multiplicity eventually neutralizes the irony being signified by virtue of its redundancy' (*ibid.*). In other words, 'the irony of pointing out the irony of something that wasn't really meant ironically isn't so ironic after all' (*ibid.*). Such memes seem to work like deforming magnifying glasses.

Conclusions: Toward a pragmatics of Internet memes

To sum it up, a typical Internet meme – a category that constitutes, *de facto*, the best and main example of a spreadable text – features a 'syntactic hook' (a modular structure, formula or template) and a 'semantic hook' (a striking element, a *punctum*, usually a 'mistake' being superimposed onto a basic semantic nucleus).²² The virality or spreadability of Internet memes lies in these two basic features and in their balancing. The one works on users' agency, the other on users' engagement. Regarding both, 'affordance' (Gibson 2014, Eco 1997: 137-139) and 'competence' (Stéfani 1982) are key concepts; memes offer elements to users' agency and codified ways to access them (affordance), and users have to be equipped with a specific knowledge in order to recognize and employ such elements (competence). We may talk of a proper 'meme literacy' (Milner 2012; cf. also Lankshear and Knobel 2007), declined into a wide range of 'stylistic practices' (cf. Eckert 2006). A spreadable text has to be striking (semantics) and has to let users engage in bricolage operations according to different degrees of intervention (syntax); the more the text is striking, the more its structure is evident, the more the text

is spreadable and potentially successful. It seems that, according to memetics terminology, the ‘longevity’ of a meme is owed to its ‘fecundity’, to the detriment of its ‘fidelity’ (its faithfulness to the original text).

In fact, the two aspects are complementary; the one dimension is incomplete without the other. In music, ‘genre’ is a typological category that encompasses both syntactic and semantic aspects; namely, some musical genres are employed to identify elements concerning both dimensions, while others are more focused on one or the other. Likewise, some memes are more focused on semantics (ready-mades), while others are focused on the cooperation between semantics and syntax (samples-remixes, mimetic, symbiotic). Obviously, different structures can carry the same content, and different contents can be carried by the same structure. It would be interesting to study the different possible combinations between the two dimensions and look for regularities.

The proposed theoretical elaboration (a visual summary of which can be found in Fig. 8) can be profitably employed in analysis as well as in content design (like the category of ‘spreadability’ proposed by Jenkins, Ford and Green 2013). Several key complementary remarks upon the topic (Internet memes, memetic practices) concerning the global significance of the phenomenon in terms of linguistic, cultural, and social impact have been omitted here due to space restrictions. Such remarks, along with the account of a proper online ethnography of selected case studies, aiming at investigating the pragmatics of these textual practices (on the basis of their syntax and semantics)²³, will be treated in a separate article.

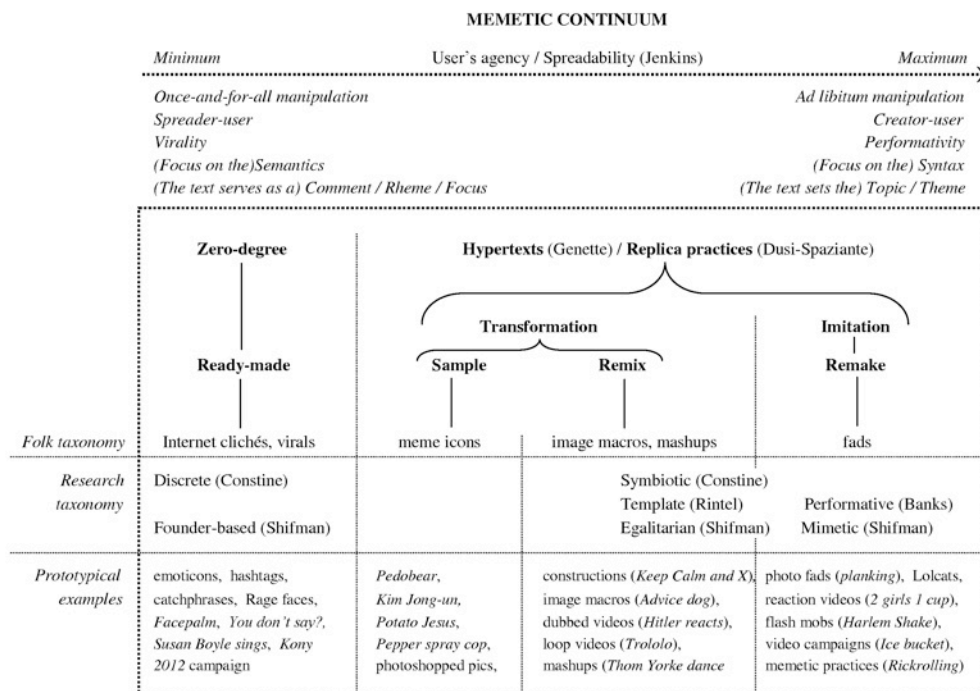


Figure 8. The memetic continuum and its structural articulations.

NOTES

- All the online resources were accessed for the last time on February 1, 2015; the now-offline ones were accessed via *Internet Archive's Wayback Machine* (<http://archive.org/web/>). All the figures are taken from *Google Images* ('Labeled for noncommercial reuse') and from the reference website *Know Your Meme* (<http://knowyourmeme.com/>), unless stated otherwise. In order to preserve the readability of the article, it was not possible to include visual examples of each of the Internet memes; the Author warmly invites the Reader to look them up at *Know Your Meme*. Acknowledgments: the Author would like to thank Ilaria Fiorentini and Linda Nurra for their insights and collaboration.

2. In semiotic terms, 'the main feature of a "text" is [...] to be an *explicative model*, rather than an *ontological* reality and, as such, to be determined, from time to time, according to the needs of the analysis. In other words, semiotics does not *seek* "texts" among its possible objects of analysis; on the contrary, it *considers* its object of analysis as a "text", which is the environment wherein the process of "meaning-making" takes place, with no regard to the specific nature of the object, which may indifferently be a novel, a picture, a dance, a square in a city, a shop window, and so forth' (Mangano 2008: 144; my trans. and italics).
3. Cf. Dawkins 1993.
4. The first version of the *Wikipedia* entry *Meme* (<http://en.wikipedia.org/wiki/Meme>) dates back to November 2001 and makes reference to the Internet as a pertinent field. In the August 15, 2004 version of the entry *List of Internet Phenomena* (http://en.wikipedia.org/wiki/List_of_Internet_phenomena) it is written that 'The individual articles from 'The Best Page in the Universe often spread memetically'. Afterwards, the very same day, the category 'Internet memes' is added to the entry. On September 3, the sentence 'Internet phenomena are often referred to as memes' is included and, afterwards, the very same day, it is edited into 'Most Internet phenomena can be often seen as good examples of memes, the self-propagating ideas'.
5. *Wikipedia*, *List of Internet Phenomena* entry.
6. The examples are taken from the September 3, 2004 version of the entry *List of Internet Phenomena* and from the December 11, 2006 version of the entry *Internet meme* (http://en.wikipedia.org/wiki/Internet_meme) on *Wikipedia*.
7. The Internet is a network of computer networks that carries information via a variety of languages known as 'protocols'. The Web (World Wide Web) is an information-sharing model that is built over the medium of the Internet and uses the Hypertext Transfer Protocol (HTTP), just one of the many languages spoken over the Internet. Whereas the Web uses the Internet, not all the Internet services use the HTTP to work (notably, emails).
8. Facebook was created in 2004, but became accessible outside of the USA the following year.
9. <http://www.4chan.org/>.
10. <http://www.reddit.com/>.
11. *Know Your Meme* is partially a wiki project. Users can submit meme entries, but each single submitted meme has to be researched by the editorial staff in order to get the status of a 'confirmed meme' phenomenon. In 2011 the website was acquired by the Cheezburger company.
12. Cf. <http://cfpm.org/jom-emit/>.
13. 'Bricolage' is a notion proposed by Claude Lévi-Strauss (1964) to describe the characteristic patterns of mythological thought. Bricolage is opposed to the engineer's creative thinking, which proceeds from goals to means on the basis of an established, coherent system of general and tested assumptions. Mythical thought, on the contrary, attempts to re-use the available means and materials in order to solve new problems. The notion of 'bricolage' has been prominently recovered and developed by Jean-Marie Floch (2006).
14. Henry Jenkins' 'convergence culture' (2006) is not in conflict with 'spreadable media'; on the contrary, while the former is a cultural system wherein technologies are content- and user-oriented, the latter is the media system that provides the means by which these contents can reach the users. 'Convergence' does not mean 'centralization'.
15. 'For Davison, the key to the success of Internet memes and their generative nature is the explicit *removal of authorship*, which he calls the "nonattribution meme"' (Mandiberg 2012: 6; my italics).
16. Limor Shifman underlines that 'Like game-playing, humor is enjoyed for its own sake' (2013: 79).
17. Shifman underlines that 'Comedy derives from an unexpected cognitive encounter between two incongruent elements' (*ibid.*).

18. Shifman underlines that such videos ‘Feature people who are unintentionally, or at least not clearly intentionally, funny’ (*ivi*: 81).
19. <http://web.archive.org/web/20130928152154/http://knowyourmeme.com/memes/popular>.
20. The genealogy of the *Harlem Shake* meme is rather complex; cf. Marino 2014.
21. <https://youtu.be/IpbDHxCV29A>.
22. Jean Burgess (2008) proposes the notion of ‘textual hook’. The term ‘hook’ is here employed in the musicological sense; in fact, in memetics, a ‘hook’ is the name given to a ‘co-meme’, namely the part of the memplex that needs the replica—usually a logic consequence, a corollary of a given meme. Jacques Geninasca (2000) would have probably talked of ‘molar’ and ‘semantic grasp’ (regarding the semantics), and of ‘rhythmic’ or ‘impressive’ grasp (regarding the syntax).
23. According to the threefold model provided by Rick Altman (1999).

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Animer la peinture en 3D et illustrer la musique: transmédiatité(s) des hommages cultistes 2.0

Annick Girard

Les hommages cultistes rendus à des œuvres cultes s'imposent désormais sur le Web 2.0 parce que la culture participative qui y règne ouvre la voie à la diffusion d'hommages réalisés autant par des professionnels que par des fans. Notamment, l'animation 3D de la peinture se démarque dans la mise en ligne de capsules visuelles et sonores qui posent un nouveau regard sur la peinture tout en illustrant la musique. Le passage de la peinture à l'animation 3D et l'illustration de la musique ainsi produite soulèvent des enjeux théoriques que le concept de transmédiatité permet d'aborder. Par exemple, la capsule 'Picasso's Guernica' (2008) de Lena Gieseke, capsule produite dans le cadre d'un mémoire de fin d'études en animation 3D, illustre la toile Guernica (1937) de Picasso qui prend des dimensions inexplorées jusque-là : le regard de la caméra plonge le spectateur au cœur d'une lecture renouvelée de cette œuvre culte grâce à la nouvelle dimension des personnages mais aussi parce que la toile se voit associée à une musique de Falla transcrite pour guitare et violoncelle. La célébration cultiste de Gieseke, clairement transmédiatité, trouve par surcroît un écho sur le Web 2.0 puisque de nombreux fans, libérés de toute contrainte institutionnelle, s'approprient cette capsule d'auteur en la modifiant. Ces capsules cultistes de fans, pas toujours transmédiatités, font ressortir une facette ou une autre de 'Picasso's Guernica' et forment un Ring Shout virtuel où la participation prime sur la performance.

MOTS CLES culture participative; transmédiatité; musique; animation 3D; œuvre culte

Introduction

Nous voyons la ressemblance là où nous la désirons, là où elle nous touche.

Méchoulan (2010:28)

Les œuvres cultes fascinent, et le cultisme¹ devient un sujet d'étude universitaire. Son anticonformisme pose un défi à la critique spécialisée puisqu'il ne s'attarde pas nécessairement à la complexité des objets: il se les approprie selon ses passions. Depuis l'essor du Web 2.0 et de la culture participative qui y règne, l'étude du cultisme est désormais facilitée par la publication en ligne d'une grande diversité d'hommages cultistes, réalisés surtout par des semi-professionnels (étudiants, artisans) ou des amateurs. Caractéristiques d'une culture du recyclage et de la régénération des objets recontextualisés au fil des adaptations diverses produites grâce à l'accessibilité du 'copier-coller', ces hommages sont produits et diffusés sans égard nécessairement à un idéal esthétique ou à la maîtrise d'une technique. Ainsi, les *lip dub*, *flash mob* et clips de toutes sortes s'inspirent d'objets d'une multitude de provenances (Girard 2014), dont des œuvres phares de la culture, sans égard aux critères qui encadrent ou contraignent habituellement les productions professionnelles. Cette culture participative² crée des objets hybrides dont les outils d'analyse importés des études cinématographiques, littéraires, linguistiques ou musicologiques ne révèlent pas toujours la pertinence. Ainsi, nombre d'hommages cultistes sur le Web 2.0 soulèvent des questions théoriques auxquelles la sémiotique peut certainement tenter de répondre. Dans cet article, il s'agira de mettre à l'épreuve le concept de transmédiatité pour montrer comment fonctionnent transgressions ou mutations que l'hommage cultiste impose à l'œuvre. Le concept de

transmédialité servira différemment à représenter deux types de célébrations représentatives de la diversité des capsules Web³ qui animent la peinture en 3D tout en illustrant la musique: les exercices de style conçus par un animateur 3D et leurs variantes produites par des internautes qui entrent dans la ronde ainsi amorcée. J'exposerai d'abord le parcours d'une œuvre culte, *Guernica* de Picasso, qui inspire nombre d'hommages cultistes Web⁴, dont 'Picasso's *Guernica*' de Lena Gieseke,⁵ exemplaire à plus d'un égard. En effet, le passage d'une peinture à l'animation 3D et son association à une musique connue des répertoires populaires ou classiques crée un objet dont la transmédialité ressort et dont l'analyse révélera la richesse. De plus, la considération de variations cultistes qui s'approprient 'Picasso's *Guernica*' mettra en lumière une des caractéristiques de la culture participative, à savoir la production et la diffusion d'une expression plus personnelle communiquée à une communauté. La transmédialité persiste ou disparaît au fil de ces variations sur un thème résolument cultistes, inscrites dans un rituel.

***Guernica* de Picasso, œuvre culte**

Les héros culturels [...] semblent faire partie de ces objets où le discours sur l'identité nationale rencontre à la fois les frontières qui le constituent et le mouvement universaliste qui le transcende ou l'abolit.

Buch (1999:139)

Picasso et ses œuvres sont très présents sur le Web,⁶ mais *Guernica*⁷ s'y distingue parce que son statut d'œuvre culte génère des hommages. D'emblée, l'importance accordée à l'œuvre retient l'attention: la littérature sur le contexte de sa création abonde et relate le parcours singulier de cette fresque qualifiée aujourd'hui d'œuvre mythique (Berthier 2008). En bref, les historiens de l'art retiennent que, peu après le bombardement du 26 avril 1937 de la ville basque espagnole Guernica, Picasso, artiste reconnu, peint cette immense toile (349,3 x 776,6 cm). Installé à Paris depuis 1904, l'homme dénonce l'horreur du massacre ordonné par les nationalistes espagnols: 2 000 civils tomberont sous les bombes nazies et fascistes. L'œuvre représentera l'Espagne à l'Exposition universelle de Paris la même année, elle voyagera ensuite durant deux ans pour se retrouver au MoMA de New York jusqu'à son arrivée tardive en Espagne, au Musée national centre d'art Reina Sophia, en 1981, parce que Picasso avait exigé qu'elle reste loin d'une Espagne franquiste. Ce parcours inusité pour un tableau maintenant parmi les plus connus mondialement contribue à en faire une œuvre culte.

Picasso se pose en 'héros culturel' à l'aube de la guerre même s'il n'était pas foncièrement militant. Les historiens de l'art lui attribuent cependant des œuvres politiques, dont trois qui le sont ouvertement.⁸ Cette œuvre emblématique est chargée d'une histoire politique⁹ qui traversera le temps. Rapidement, *Guernica* représente une violence tyrannique imposée aux hommes. Peinture phare du XX^e siècle, *Guernica* a encore de l'impact et continue d'être continuellement recyclée de diverses manières, devenant un objet de culte. Ainsi, le phénomène décrit par Vandendorpe s'applique à *Guernica*:

Pour retenir l'attention du spectateur, l'image doit d'abord l'interpeller par l'effet qu'elle produit et les émotions qu'elle est à même de susciter. [...] Une fois exprimées par des propositions verbales, ces perceptions visuelles permettront éventuellement à d'autres personnes de participer de la même expérience de construction de sens. En se multipliant, elles en arriveront à conférer à l'objet une sorte d'aura, qui fonctionnera à la façon d'une matrice de réception esthétique. C'est ainsi que certaines images laissent des traces durables dans la mémoire individuelle et collective. Dans le meilleur des cas, elles finiront par accéder au statut d' 'icônes' culturelle et seront inlassablement citées, commentées, reproduites ou pastichées. (Vandendorpe 2005: 25-26)

De plus, comme il n'existe pas d'images captées lors du bombardement, l'œuvre surréaliste servira à illustrer l'événement historique (Berthier 2008), ce qui, paradoxalement, nourrit le culte. En effet, une des

caractéristiques des productions cultes (films ou séries) est qu'elles ne 'réfèrent jamais à une réalité immédiate, mais à des univers fictifs, déjà fortement connotés et surcodifiés' (Aubry 2009:18). Même si *Guernica* réfère à un réel bombardement, l'absence d'archives et surtout le surréalisme de la toile, propre à exprimer la dimension cauchemardesque du chaos, instaurent une certaine distance avec la réalité. De plus, quand Picasso recontextualise dans *Guernica* des figures récurrentes dans son travail (le taureau, la mère et l'enfant, etc.) et dans l'histoire de la peinture (la mère et l'enfant), son univers fictif, fortement codifié, s'impose.

L'horreur et la souffrance illustrées ont également desservi la dénonciation d'autres conflits: le caractère intemporel et universel de *Guernica* a confirmé sa puissance et l'a rendue, selon Schneider, impossible à détourner¹⁰ du sens qu'elle véhicule depuis sa création.¹¹ Picasso a aussi produit des œuvres qui valorisent et symbolisent la paix, comme *La colombe de la paix* (1949). Le peintre promeut la paix; il dénonce la guerre. Bref, ce géant de la peinture se pose, dès 1937, comme défenseur pacifique de son peuple, il n'a jamais cessé depuis d'inspirer la créativité, tout comme le drame de *Guernica* d'ailleurs,¹² ce que les hommages rendus relèvent.

Voilà comment la toile a gagné sa dimension désormais mythique, comment l'événement historique qu'elle dénonce a provoqué des émotions fortes. Cela nourrit un culte dont plusieurs manifestations, des hommages cultistes, se retrouvent sur le Web 2.0. où la culture participative transforme le profil de *Guernica*.

Transmédialité et culture participative

Dans la 'transmédialité', il s'agit toujours d'un phénomène de transgression de frontières, d'hybridations, de transformations et de translation.

Toro (2013:74)

Quelles que soient les variables en jeu, le potentiel de ces capsules réside dans le scénario privilégié et dans le choix d'une bande sonore qui dynamise la lecture de l'œuvre. Le cas de *Guernica* est ici exemplaire justement parce que la toile possède une histoire riche, parce que Picasso est lui-même une figure mythique associée à la redéfinition des règles d'un art et que son culte s'impose en ligne. Parmi les nombreux *Guernica* virtuels, j'analyserai celle de Gieseke parce qu'elle se concentre sur une toile, qu'elle constitue une réussite en matière d'animation 3D, qu'elle joue sur la transmédialité de tous les médias en jeu en plus de susciter un engouement qui mène des internautes à la modifier à leur guise. Cela cerne le passage d'une œuvre culte picturale en une capsule 3D et musicale variée au gré d'hommages caractéristiques de la culture participative.

'Picasso's *Guernica*' (2008)

L'indéniable unité esthétique de la capsule 3D de Gieseke se révélera à une analyse en trois parties qui s'intéressera au visuel, au sonore puis à la rencontre des deux. Ce découpage, hérité des études cinématographiques, me mènera à comparer les effets produits par l'association du visuel, dont le texte qu'il contient, à la dimension sonore que la musique de Falla occupe. Je discuterai simultanément de l'apport du concept de transmédialité (Toro 2013) pour mieux dégager la complexité des capsules 3D qui célèbrent musicalement la peinture puisque celle de Gieseke transgresse de nombreuses frontières.¹³

Cette animation 3D de *Guernica* met en œuvre le parcours d'un regard singulier de près de trois minutes¹⁴ dans l'œuvre en noir, blanc et gris de Picasso. Si la toile cubiste surréaliste superpose des formes et exige du spectateur une identification des personnages, animaux et objets, l'animation 3D, parce qu'elle présente une vision des proportions possibles des éléments, propose une immersion au cœur de l'œuvre qui détermine un parcours précis d'une durée déterminée. Ainsi, après avoir lu le titre et le rappel¹⁵ des événements qui ont inspiré le projet au peintre, le récepteur voit la toile de Picasso pour constater qu'elle prend graduellement une forme tridimensionnelle: un zoom in rapide mène à l'animation 3D. Si le mouvement de la caméra donne l'impression

que les personnages s'animeront, le regard est plutôt guidé et dirigé par lui, de la gauche à la droite (parfois un peu à rebours), passant d'un personnage à l'autre, s'attardant aux diverses dimensions du drame.

La proposition de Gieseke mène à redécouvrir l'œuvre par une immersion visuelle et à partager ainsi sa lecture dudit tableau. La profondeur qu'elle lui donne en divise les composantes: elle montre de près la main et le visage de la victime au sol (le cavalier, bas gauche), elle passe ensuite à l'enfant et à sa mère juste derrière (parcours en gros plan, léger recul pour montrer l'ensemble, insistance sur le cri de la mère), au taureau et à l'oiseau (l'arrière-plan), à la lampe-œil, à la lampe à l'huile puis au personnage qui la tient; le regard descend et remonte pour voir de haut un personnage en détresse, passe entre ce dernier et la femme devant; un léger recul présente l'ensemble (partie droite), rappelle son unité, cède à un zoom in sur le cheval, sa gueule puis son flanc transpercé, en continuant vers le bas (léger zoom out), il attire lentement l'attention sur le sol où la main armée d'un glaive gît près de la fleur juste au-dessus, image porteuse d'espoir avant le générique. Le générique tient en une image (la barre oblique indique les changements de lignes): 'Created by/Lena Gieseke, Music/Nana by Manuel de Falla/Cello Christopher Johns/Guitar Matthew Anderson/The University of Georgia'. Ainsi, le parcours visuel montre l'inédit, révèle une dimension jamais explorée de l'œuvre et en régénère les lectures possibles: son sens n'est pas détourné, mais la visite virtuelle de la toile, non pas celle du musée où elle est exposée, transgresse des frontières qui confèrent à la capsule son caractère transmédial.¹⁶

Selon Toro, six critères¹⁷ permettent de confirmer le caractère transmédial d'un objet (Toro 2013: 74); trois concernent directement le visuel de 'Picasso's *Guernica*'. D'abord, l'animation 3D d'une peinture est en soi un 'concept esthétique-opérationnel' au sens où elle donne corps aux personnages et qu'elle permet au regard de visiter *Guernica*, de 'déambuler' entre ses composantes. De plus, cette esthétique interrompt 'l'illusion fictionnelle' propre à la toile surréaliste qui illustre le chaos de la guerre pour 'diriger l'attention des spectateurs sur la construction de l'artefact' (Toro 2013: 74). En effet, parce que l'animation atténue considérablement le surréalisme de *Guernica*, le cauchemar exprimé, elle opère une transgression notable au plan esthétique. En fait, la fluidité du parcours 3D, notamment parce qu'elle invite à lire l'œuvre de gauche à droite, tend à aplanir l'expression du chaos, à 'figer' ce dernier autrement que dans la toile. L'hommage visuel de Gieseke provoque un certain ravissement, mais la fascination du regard, encore présente aujourd'hui pour le 3D à l'écran, hypnotise presque le regard des spectateurs. La transmédialité en jeu soutient l'hommage visuel qui renouvelle la lecture de l'œuvre culte exposée au musée tout en créant un objet qui suivra sa propre trajectoire sur le Web.

Dimension sonore

Si le visuel de cette capsule rend un hommage indéniablement créatif à la toile de Picasso, sa trame sonore contribue directement à la recontextualisation de Gieseke. En effet, le début 'silencieux',¹⁸ cède à une musique dépouillée et lente. La première note de guitare résonne seule quand le zoom in s'empare du regard du spectateur pour débiter l'immersion visuelle. La progression du regard dans l'animation 3D est jumelée à un duo guitare-violoncelle qui rythme le pas. Cette musique semblera peut-être réconfortante, enveloppante pour le spectateur, voire solennelle, elle s'impose comme fil d'Ariane sonore. Gieseke choisit *Nana*, une chanson populaire de Manuel de Falla (1876-1946),¹⁹ partie d'un ensemble de sept berceuses populaires espagnoles, *Siete canciones populares españolas* (1914-15), achevées à Paris par Falla. Composée pour voix et piano, *Nana*, cinquième pièce, invite en quelques phrases une petite fille (*nana, nanita*), 'petite étoile du matin', à dormir. Les paroles évoquent la tendresse, le repos. Alors que la musique de Falla est reconnue pour cerner 'les caractères essentiels de la musique espagnole', cette berceuse n'est pas présentée dans sa version originale,²⁰ elle écarte la voix et privilégie la guitare et le violoncelle, nuances majeures en matière de recontextualisation (Vignal 1989: 279). Il importe alors de considérer ce que la pièce évoque.²¹ Ici, la transcription, qui remplace le piano par la guitare et la voix féminine par le violoncelle, écarte complètement le texte²² de la berceuse livré sur une mélodie hispanisante pour explorer deux sonorités d'instrument à cordes qui se relaient ou s'entremêlent: l'une, celle de

la guitare dont on pince les cordes, s'associe à l'Espagne et révèle la simplicité de la composition; l'autre, celle du violoncelle dont un archet fait vibrer les cordes dans une registre relativement grave, accentue la charge émotive caractéristique de *Nana* et établie par la guitare. En somme, la voix féminine, maternelle, est supprimée au profit de l'expression de l'association de l'Espagne à la tristesse, processus proprement musical qui laisse entrevoir la transmédianalité.

Si la musique en général n'est pas forcément transmédiale dès qu'elle est associée à l'image, la transcription de la chanson de Falla est ici transmédiale selon plusieurs critères. Notamment, l'entremêlement de la guitare et du violoncelle traduit une tension entre deux sonorités que j'associe à l'écho d'une ville espagnole agressée et d'un artiste peintre qui mesure à distance son impuissance devant l'horreur. En clair, la transcription modifie l'interprétation possible de *Nana*; la suppression du récit contenu dans le texte contribue aussi à la fonction métamédiale en dirigeant l'attention du 'spectateur' (ou de l'auditeur) sur la nouvelle dimension de *Guernica* explorée par Gieseke, la dimension sonore inédite qui soutient l'ampleur donnée au visuel par le 3D. Le simple changement des instruments par la transcription confère à *Nana* une singularité notable, d'autant qu'elle est associée à tout un contexte culturel. Sans être une œuvre culte, *Nana* a son propre parcours historique et ses quelques notes évoquent une foule d'informations. Entre autres, Falla passe plusieurs années à Paris et s'intéresse à la musique européenne en général, produisant une musique autant nationale qu'universelle: 'Nationale, sa musique sut le rester; mais universelle elle le devint [...]' (Pistone 1999: 80) Cette version d'une chanson du folklore est partagée entre ses origines hispaniques et l'universalité de la berceuse, chant que les mères soufflent à l'oreille des enfants pour les endormir. Antérieure à *Guernica*, *Nana* n'est pas moins concernée par le spectre de la guerre et de ses horreurs. Dès lors, elle se voit partagée entre le groupe des chansons auquel elle appartient et d'autres objets. Si elle insiste sur le réconfort nécessaire pour aider une petite étoile du matin à se reposer (texte supprimé), la berceuse recontextualisée rappelle la collaboration historique entre Falla, Picasso et Diaghilev. Le contexte culturel évoqué s'étend ainsi aux cercles artistiques de l'époque. Notamment, une chanson populaire introduite dans le répertoire 'classique', 'Nana de Sevilla' (1930),²³ mène à Federico Garcia Lorca, auteur d'une série intitulée *Las Nanas infantiles (Les Berceuses)*. Ami de Falla, Garcia Lorca a parcouru l'Espagne pour 'rechercher les éléments vivants, durables, dans lesquels l'instant ne se fige pas [...] une chanson surgit tout à coup de ce passé jusqu'à notre présent [...] apportant la lumière vive des heures anciennes, grâce au souffle de la mélodie' (Garcia Lorca 2009:11). Garcia Lorca écrit que les mélodies des berceuses espagnoles se distinguent par leur tristesse et leur gravité: il souligne l'importance du projet de Falla pour préserver et valoriser cet héritage folklorique (*ibid*). Ainsi, les berceuses des deux hommes, presque indissociables par leur gravité et leur thématique, sont désormais réunies sur les compilations de musique populaire espagnole ou lors de concerts thématiques.²⁴ Les liens se multiplient donc entre elles, ce qui renforce l'impression de la première écoute de *Nana*, à savoir qu'elle est typiquement espagnole dans sa musicalité et universelle dans son propos.

Sonoriser la peinture, illustrer la musique

La musique a été pour Picasso un instrument de mesure de sa propre démarche. [...] La musique a habité le peintre, toute son œuvre en porte la trace.

Bernager (1996:48)

L'analyse en deux temps du visuel et du sonore de 'Picasso's *Guernica*' révèle le potentiel de l'animation 3D qui associe des toiles célèbres et de la musique. Ainsi, sonorisation de la peinture et illustration de la musique sont interdépendantes même si chaque média en jeu préserve sa particularité. Cette tension constante ressort d'autant quand on remarque que le visuel contient un texte informatif en anglais mais que seule la musique se charge de la 'narration'.²⁵ Ainsi, le silence du début encadre l'écrit blanc sur fond noir, rappel visuel du cinéma muet dont la musique ponctuait d'ailleurs l'action en salle. Ce silence confronte le lecteur aux faits historiques et reprend le dispositif de l'exposition en salle de la toile en menant cependant à un univers autre par ce saut

technologique vertigineux qui propulse le cinéma muet dans une animation 3D transmédiiale. Le choix de l'anglais par une Allemande attire aussi l'attention. Si cette langue règne²⁶ sur le Web et qu'elle est en vigueur dans l'institution où Gieseke étudie, elle se révèle une langue 'diplomatique' dans la capsule, ce qui expose les faits historiques plutôt que la nationalité de Picasso, des victimes ou de Gieseke. En ce sens, l'anglais propage le message intemporel et universel de *Guernica*, rappelant indirectement son séjour new-yorkais. L'anglais écrit cède ensuite à la musique l'accompagnement de la visite virtuelle.

En plus de donner un cadre temporel à 'Picasso's *Guernica*', *Nana* rappelle un contexte culturel foisonnant et s'impose comme la représentation du phénomène de l'illustration de la musique en essor sur le Web. Dans la mesure où *Guernica* et *Nana* sont revisités et recontextualisés dans la capsule de Gieseke, dans la mesure où la berceuse semble assez riche pour nourrir une analyse de sa portée symbolique, les deux œuvres sont illustrées. Si le titre 'Picasso's *Guernica*' et les textes orientent la perception du spectateur vers le visuel au début de la capsule, la berceuse trouve une illustration inédite jusque-là, une illustration partagée entre les liens possibles avec d'autres berceuses espagnoles et une indéniable singularité accordée à *Nana* grâce au visuel.²⁷ Alors que l'image semble souvent avoir préséance sur le son, la musique, elle, trouve une illustration qui montre l'anticipation du malheur qu'elle contient, qui suscite des émotions que même une image 3D ne saurait provoquer. Au lieu de miser sur un silence, la capsule de Gieseke, réalisée pour un projet de fin d'études supérieures en animation 3D, charge la berceuse d'un drame intemporel et universel, un drame dont elle peut cependant bercer la mémoire d'une main à la guitare, de l'autre au violoncelle, tout en rappelant une époque naïve où l'extrême violence des conflits mondiaux à venir restait insoupçonnée.

Le traitement de la musique constitue d'ailleurs une porte d'entrée à l'identification de la transmédiialité. Courante en musique, la transcription opère des transformations majeures au plan de la signification. Pour la berceuse de Falla, la disparition de la voix importe. En effet, le choix 'éditorial' de Gieseke supprime la voix féminine, maternelle, au profit du violoncelle. Plutôt que d'y voir une reprise symbolique du geste destructeur historique, une analyse de la transmédiialité ici en jeu permet de voir l'apport de cette modification.

En effervescence sur le Web, les animations 3D de peintures célèbres associées à la musique s'imposent à titre d'œuvres transmédiiales justement parce qu'un phénomène de *tension* et de *friction* caractérise la relation entre le visuel et le sonore. La capsule de Gieseke est aussi exemplaire à ce chapitre: *Guernica* de Picasso change de dimension au plan visuel, mais se voit d'autant 'remodelée' par l'apport de la musique de Falla justement parce qu'une tension persiste entre l'identité même de ce type de capsule qui sonorise la peinture tout en illustrant la musique. De fait, la transmédiialité repose sur une autonomie persistante des médias impliqués: qu'il s'agisse de la capsule de Gieseke ou d'une autre, la toile d'origine, l'animation 3D et la musique gardent leur autonomie (Toro parle d'une autonomie 'visible', j'ajouterai 'audible') (Toro 2013: 74). Ces médias ne sont pas subordonnés les uns aux autres: la toile reste exposée au public au musée tout en étant recontextualisée sur le Web, ce qui contribue à nourrir le mythe de *Guernica*. Ainsi, l'animation 3D ressort d'emblée et fascine le regard; la musique rythme le parcours. Cette autonomie n'est d'ailleurs pas atténuée par l'unité esthétique de la capsule: le caractère partagé de l'objet persiste et sera exploité par la culture participative Web.

En fait, le caractère partagé de l'objet réside d'entrée de jeu dans le titre 'Picasso's *Guernica*'. Si le lettrage n'apparaît pas en 3D, ses sens possibles annoncent l'exercice de style qui explore différentes avenues. En effet, le titre indique qu'il s'agit du *Guernica* de Picasso (plan figé de la toile en 2D) alors que l'animation 3D sera principalement donnée à voir, alors qu'elle fascinera le regard. En ce sens, voilà déjà une manière d'attirer l'attention sur la transmédiialité et ses transgressions certes, mais aussi de poser la question de l'identité de l'œuvre, de son 'authenticité', d'instaurer un jeu autour de cela avant même de montrer le 3D.²⁸ Dans ce titre, le décalage et la grande complémentarité entre l'Histoire et la toile surréaliste sont soulignés mais confèrent au regard de Picasso une force inédite.

Parce qu'il ne désigne que Picasso et sa toile célèbre, le titre introduit la complémentarité du visuel et du sonore de l'animation 3D. Si le parcours visuel dans la toile guide le regard du spectateur, il lui prête également celui de l'artiste qui imagine le drame, qui côtoie les personnages de son imaginaire, qui reste muet devant le

chaos mais dont le for intérieur laisse entendre les échos d'une tristesse: la mélodie triste d'un folklore vibrant, l'absence de la voix maternelle réconfortante, la musique d'un ami, la guitare (tant illustrée dans son œuvre complet²⁹) et le violoncelle (souvent associé à la souffrance). Dès lors, le *Guernica* de Picasso sur lequel Gieseke attire l'attention, c'est celui de la solitude de l'artiste dont le regard 3D se fait l'avatar pour proposer une version de son imaginaire visuel et sonore.

Culture participative et variations sur un thème

In embracing popular texts, the fans claim those works as their own, remaking them in their own image, forcing them to respond to their needs and to gratify their desires.

Jenkins (1988:11)

Le fonctionnement de la culture participative est connu, et, entre autres sous l'impulsion des travaux de Jenkins, la recherche s'est intéressée au 'braconnage' que pourraient être les nombreux emprunts effectués par les internautes à ce qui est mis en ligne et au 'bricolage' auquel les adeptes de cette culture s'adonnent (Archibald 2009; Jenkins 2013; Jenkins 1988). Les capsules qui animent la peinture en 3D et qui illustrent ainsi la musique, ces exercices de style qui tournent à des hommages cultistes aussi riches que celui de Gieseke, n'échappent pas au bricolage que les fans produisent, ce qui témoigne d'une différence majeure entre les deux types de capsules mais également une grande complémentarité : la capsule entièrement conçue par un auteur et la capsule 'variée' par des internautes. La 'capsule d'auteur' trouve un public en ligne et rassemble une communauté. Des membres de cette dernière manifestent leur intérêt en se l'appropriant de façon personnelle, mais en produisant une variante qui accentue, la plupart du temps, un trait caractéristique de la capsule, comme si la lecture des internautes portait sur une seule facette.³⁰ Ainsi, 'Picasso's *Guernica*' connaît une certaine popularité en ligne et subit diverses transformations au fil des variations, comme le thème d'une musique décliné en variations par un compositeur. Quelles que soient les variations de 'Picasso's *Guernica*', elle demeure reconnaissable, mais chaque objet remet en jeu la transmédiabilité: il ne s'agit plus uniquement du passage d'une image en 3D; il s'agit d'une déclinaison des possibles de la capsule de Gieseke et de l'affirmation de propos qu'elle dessert ainsi.

Sans faire une liste exhaustive de ces objets-variantes, car ils apparaissent, disparaissent et réapparaissent aléatoirement sur le Web, j'en choisis cinq représentatifs des variantes les plus typiques (visuelles ou musicales) des bricolages de la culture participative.³¹ Le relevé des principales variantes servira à vérifier comment elles amplifient une facette de 'Picasso's *Guernica*', comment elles mettent la transmédiabilité à l'épreuve pour montrer comment, une fois considérée dans la communauté qu'elles forment, ces capsules sont la manifestation d'un *Ring Shout* virtuel engagé et relativement créatif.

La version stéréoscopique d'Inouek3D double l'animation 3D de Gieseke sans reprendre le texte (sauf le générique final): les moitiés gauche et droite de l'écran montrent simultanément le parcours visuel. Cet exercice de style promeut la puissance du stéréoscopique. Le processus interrompt complètement l'illusion fictionnelle et la fonction méta-médiale hypnotise littéralement le regard, au point où ce qui n'est pas stéréoscopique semble moins percutant: la transmédiabilité repose surtout sur cette tension entre la technologie qui monopolise l'attention et la musique jamais reléguée au second plan mais moins efficace.

'Guernica en tres dimensiones' de Cello traduit le texte de Gieseke en espagnol, mais le visuel est davantage modifié. La traduction attribue deux auteurs (sans mentionner le nom du traducteur): El Guernica (ligne 1) Pablo Picasso/Lena Gieseke (ligne 2, en plus petit). Le résumé historique de la première phrase reste, mais la seconde cite Picasso qui disait que la peinture est une arme offensive et défensive contre l'ennemi, pas une décoration. *Nana* résonne, dès l'apparition du titre, en version pour piano et violoncelle (le générique final mentionne la modification). En regard du travail de Gieseke, cette 'traduction' relaie l'hommage à la communauté unilingue hispanophone sans opérer de transmédiabilité; cette dernière se manifeste uniquement pour l'internaute qui ne connaît pas 'Picasso's *Guernica*'.

‘El Guernica en 3D’ de Torma1962 juxtapose au visuel de Gieseke la chanson ‘Al Alba’ interprétée par Rosa Leon, chanteuse espagnole engagée (la musique commence avant l’animation 3D). Composée par Luis Eduardo Aute pour dénoncer les dernières exécutions du régime franquiste en 1975, la chanson exacerbe un militantisme latent dans le visuel. L’autonomie des médias impliqués demeure, ils ne sont pas subordonnés l’un à l’autre, mais les paroles en espagnol et la notoriété de la chanteuse transforment le visuel de Gieseke en vidéoclip transmédiat en raison de la tension créée par la juxtaposition d’un son des années 1970 à une animation 3D.

Le ‘Guernica’ d’Esyshia juxtapose une autre dimension sonore au visuel, inchangé ici, sauf pour le générique final qui mentionne que ‘Rock N’Roll Suicide’³² est interprété par Seu Jorge. Les images du texte sont doublées de bruits de bombardements; une voix masculine, accompagnée à la guitare, interprète la chanson de Bowie en espagnol. Voilà deux objets cultes réinterprétés et célébrés ensemble, phénomène fréquent en ligne qui établit une tension proprement transmédiat.

‘La Guernica by Pablo Picasso in 3D’ d’ArtFido.com présente une musique hispanisante rappelant la corrida: des percussions rythmées accompagnent le texte, une guitare puissante s’ajoute quand *Guernica* apparaît, le générique final n’apparaît pas. Ce remodelage sonore témoigne d’une lecture personnelle où la puissance ressort plus que la tristesse. Comme pour la capsule de Cello, la transmédiatité est manifeste seulement si le spectateur ne connaît pas ‘Picasso’s *Guernica*’.

En somme, ce jeu interactif du ‘copier-coller’ de la culture participative dont témoignent ces variantes est facilité par la reproductibilité des objets, phénomène identifié par Benjamin bien avant l’avènement du Web (Benjamin 1991). Ce jeu des possibles auquel se joignent des internautes même s’ils n’ont développé aucun savoir-faire artistique traditionnel comme le dessin, la peinture ou l’interprétation musicale, ce jeu ressemble, dans sa dynamique, au *Ring Shout* présenté par Béthune dans un ouvrage consacré au rap (Béthune 2003). En fait, il s’appuie sur Benjamin pour montrer comment une culture peut reposer sur une participation plutôt que sur une performance exceptionnelle. Il résume ainsi la réflexion de Benjamin: le démantèlement de ‘l’aura [créé par la reproduction mécanisée] de l’art fait prévaloir les valeurs de jeu sur la valeur d’exposition’ (Béthune 2003: 11). Ces valeurs de jeu caractérisent l’hommage cultiste 2.0 puisqu’il reproduit les objets comme il rassemble une communauté autour d’un *Ring Shout* virtuel. Tradition culturelle noire africaine des plus participatives que Béthune³³ reconnaît pour sa part dans la culture hip-hop, le *Ring Shout* est ce cercle de danseurs-chanteurs-musiciens où chacun est à tour de rôle invité à offrir une performance avant de retourner dans le rang, ce qui crée une communauté participative plutôt que performative: ‘dans cette forme d’expression, être artiste ne renvoie pas à un statut, [à] une nature exceptionnelle dont le génie serait posé une fois pour toutes, mais tient aux expériences que les individus sont en mesure d’initier’ (Béthune 2003: 18). Il semble que la culture participative fonctionne de même, c’est justement ce que les hommages identifiés confirment.

Hommages cultistes 2.0

En conclusion, il ressort que le cultisme est un phénomène loin de se limiter à scander des répliques durant la projection d’un film culte comme *The Rocky Horror Picture Show* (1975), et la culture participative en vigueur sur le Web fournit des objets susceptibles d’intéresser les universitaires s’ils adaptent leur pratique comme le propose notamment Archibald à l’instar d’Audrey et Visy. Entre autres, l’analyse de capsules cultistes qui animent une peinture célèbre en 3D tout en illustrant la musique fait ressortir l’importance de distinguer le travail des quasi-professionnels de celui des fans sans les dissocier, sans établir de hiérarchie quant à la ‘performance’. Certes, l’exercice de style de Gieseke se distingue (réussite de l’animation 3D, composition riche), mais cette capsule d’auteur, cultiste en soi, constitue un lien fort entre la toile de Picasso exposée en salle et les hommages plus personnels diffusés sur le Web pour être partagés, formant un *Ring Shout* virtuel.

Aussi, le concept de transmédiatité permet justement de comprendre les ‘transgressions’ alors opérées, d’aborder la question de l’identité de l’œuvre au fil de ses mutations et de ses juxtapositions à d’autres œuvres.

Notamment, l'illustration d'une transcription de la musique de Falla grâce à l'animation 3D de *Guernica* fournit un cadre temporel à l'œuvre de Picasso, entourée d'un noir profond dans cette recontextualisation. Il importe de dégager nombre de détails au cœur de cette transmédialité pour constater que les variantes répondent à un des aspects identifiés, à une seule facette de la capsule d'auteur. Quand les variantes s'accumulent, la transmédialité ressort selon que les modifications amplifient ou non la tension en jeu. L'intérêt des variantes données en exemple précédemment réside aussi dans ce qu'elles révèlent de l'engagement des fans, de leur volonté de confronter des univers sans 'complexifier' le geste posé. En ce sens, ces hommages ne s'inscrivent-ils pas dans la veine de la démarche même de Picasso qui dit avoir cherché toute sa vie comment dessiner comme un enfant?

Ce regard sur les capsules Web qui animent la peinture en 3D et qui illustrent la musique laisse plusieurs pistes inexplorées. Entre autres, si l'abondance des capsules ressort en quelques clics, impossible de décrire l'ampleur du phénomène en quelques pages. Notamment, les écoles d'animation 3D diffusent volontiers les travaux des étudiants, qui, eux, portent un grand intérêt aux œuvres phares de la peinture, ce qui les dépoussière aux yeux de plusieurs. Le cycle ainsi amorcé régénère les œuvres en jeu et nourrit le mythe qui les entoure parfois. La musique aussi trouve en ligne des illustrations inédites ou inaccessibles auparavant tout en révélant le fort potentiel de sa maniabilité. Ces nouveaux hommages cultistes témoignent d'une créativité fortement soutenue par la technologie, mais force est de constater que le mouvement qui les génère semble toujours animé par le désir d'appartenir à une communauté.

NOTES

24. Aubry définit le cultisme 'comme une forme d'herméneutique populaire souvent intempestive, iconoclaste, indisciplinée, qui tenterait d'échapper autant aux embrigadements de la culture d'élite que de la culture de masse' (Aubry 2009:18). Elle précise qu'il 's'agit donc d'une posture fondamentalement anticonformiste, qui ne s'appuie sur aucune idéologie esthétique et sociale univoque' (*Ibid*).
25. Jenkins a proposé en 1992 le concept de "participatory culture" qui a évolué depuis, il est ainsi défini dans *Spreadable Media*: 'it now refers to a range of différentt groups deploying media production and distribution to serve their collective interests [...]' (Jenkins et al. 2013: 2). Dans sa synthèse des travaux consacrés à la culture populaire, Archibald étend le concept d'une 'herméneutique populaire' développé par Aubry pour l'étude des films et des séries cultes: d'après lui, ce concept couvre 'tout ce qu'il y a à savoir sur le rapport aux textes de la culture participative: soit une volonté d'engagement interprétatif dirigée vers des objets issus de la culture populaire' (Archibald 2009: 4). Il inclut dans la culture participative les cultistes, les fans, les geeks. (*Ibid*)
26. Il ne s'agit pas ici de classer exhaustivement les diverses capsules Web cultistes mais d'attirer l'attention sur deux pôles aussi opposés que complémentaires.
27. Pour davantage de capsules-hommage à *Guernica*, voir celles d'Ortiz (dont Canale di Chiamassari et Preti ont fait chacun une variante), d'Everard et de Popov (hyperliens dans la médiagraphie).
28. Deux Lena Gieseke cohabitent sur le Web: une photographe et cette spécialiste du 3D à l'Université de Stuttgart. L'origine de cette dernière donne une dimension politique à sa capsule qui souligne les horreurs commises en 1937 et dont le parcours visuel dans l'univers de Picasso, des victimes jusqu'à la fleur (note d'espoir), confirme la dénonciation du geste guerrier, un appui au peintre.
29. Pour une liste d'hommages musicaux rendus à Picasso et à ses œuvres, voir le site du Musée Picasso (Leleu 2014).
30. Uniquement sur Youtube, plus de 200 vidéos sur le thème de *Guernica* sont proposées: documentaires d'art, documents d'archives historiques, productions amateurs qui rendent hommage à l'œuvre de Picasso ou à d'autres inspirées du même thème. Ces objets sont regroupés sans 'ligne éditoriale', sans clivage fondé sur le type de capsule, sa qualité ou sa provenance.

31. Schneider identifie trois œuvres directement politiques, réalisées avant ou après la Seconde guerre mondiale: *Songe et mensonge de Franco* (1937), *Guernica* (1937), *Le Charnier* (1945) (Schneider 1993). Warncke divise la vie du peintre en six chapitres, l'avant-dernier s'intitule 'Guerre, art et politique 1937-1973': *Guernica* et *Le Charnier* y figurent, *Massacre en Corée* (1951) et *La Guerre* (1952) aussi (Warncke 2006: 145-191).
32. Sans définir une typologie des œuvres cultes puisque le phénomène échappe souvent à toute prévision, je remarque toutefois que plusieurs ont une histoire politique riche qui nourrit leur culte. Par exemple, la *Neuvième* de Beethoven a un parcours éloquent à ce chapitre (Buch 1999); les parallèles sont ici nombreux entre *Guernica* et la *Neuvième* dont, entre autres, l'envergure des auteurs et les hommages rendus.
33. Schneider relate un détournement de *Guernica* dans une publicité de l'armée fédérale allemande en 1990, cause d'une controverse sans précédent (Schneider 1993).
34. La culture participative échappe à ce type d'observation puisqu'elle s'approprie les œuvres cultes sans nécessairement tenir compte des analyses canoniques les concernant.
35. Parmi les titres les plus connus consacrés au bombardement de la ville basque ou à la toile de Picasso, notons *Guernica* (1937), une musique de Paul Dessau; *La victoire de Guernica* (1938), poésie d'Éluard, et *La victoire de Guernica* (1954), musique de Nono; *Guernica* (1950), court-métrage de Hessens et Renais; *Mourir à Madrid* (1963) documentaire de Rossif; *Guernica* (1978), court-métrage de fin d'étude de Kusturica.
36. Cet article ne dresse pas une liste exhaustive de ce qui différencie les capsules étudiées des autres objets audio-visuels connus, je mentionnerai au passage quelques frontières transgressées pour confirmer la présence de la transmédialité.
37. Voici un découpage du minutage de la capsule: titre blanc sur fond noir (00:01-00:03); noir (00:04); texte blanc sur fond noir 1 (00:05-00:12); texte blanc sur fond noir 2 (00:12-00:18); noir (00:19-00:20); zoom in (00:27-00:34); zoom out (00:34-00:43); début du parcours du regard (00:44); enfant (00:54); mère (01:00); taureau (01:11); oiseau (01:20); lampe et personnage (01:26); autre personnage (01:40); femme (02:05); cheval (02:15); flanc du cheval (02:15); glaive et fleur (02:37); générique en un plan, blanc sur fond noir (02:49-02:53).
38. La fonction du texte et l'utilisation de l'anglais important, j'en reparlerai plus loin dans l'analyse. Voici sa transcription pour l'instant: 'In 1937, during the Spanish civil war, the fascists devastated the town of Guernica with aerial bombings executed by the Nazi Luftwaffe' (diapositive 2); 'Picasso's painting *Guernica* was this reaction to the tragedy' (diapositive 3) (Gieseke 2008).
39. Je retiens les travaux d'Alfonso de Toro pour exposer le concept de transmédialité. Voici un extrait de sa définition (les exemples entre parenthèses sont supprimés): '[...] un processus ou une stratégie anti-mimétique dans le sens d'une relation hybride et intensivement chargée [...] entre différents médias opérant de façon autonome [...] entre des esthétiques diverses [...] mais aussi entre des médias mélangés [...]' (Toro 2013:73).
40. Pour Toro, la transmédialité dépasse la 'synergie de médias' ou la 'coexistence de divers médias'. Il s'agit 'a) d'un phénomène de *friction et de tension*, b) un *concept esthétique-opérationnel*, c) un processus à l'intérieur duquel chaque média impliqué reste *autonome et visible*, d) un processus à l'intérieur duquel la relation réciproque n'est pas *fonctionnalisée ou subordonnée* à un autre média, e) un processus servant à interrompre *l'illusion fictionnelle* et servant aussi f) de *fonction métamédiale*, aidant à révéler les processus médiatiques et à diriger l'attention des spectateurs sur la construction de l'artefact' (Toro 2013:74).
41. Il importe de signaler ici que le 'silence' de la capsule reproduit en quelque sorte le dispositif de l'exposition en salle d'une peinture qui ne prévoit pas, traditionnellement du moins, d'ambiance sonore particulière, sauf celle créée par le va-et-vient des visiteurs. Par exemple, *Guernica* n'est pas exposée sous les bruits des bombardements ou n'est pas associée à une musique d'ambiance, le silence relatif de la salle d'exposition contribue à confronter le spectateur au néant provoqué par la violence.

42. Contemporain de Picasso qui le dessina en 1920, Manuel de Falla reste l'un des plus célèbres compositeurs espagnols, il se rendra à Paris, en 1907, et échangera avec les artistes marquants de l'époque, notamment Debussy, Ravel, Stravinsky (Vignal 1989: 278-279). Il parcourra l'Espagne en 1914-1915, puis s'établira à Madrid. Il composera pour Diaghilev la musique du ballet *Le Tricorne* (1919) dont Picasso créera costumes et décors.
43. Quand une musique est souvent transcrite, cela confirme sa popularité. Voici une précision sur les chansons populaires de Falla : 'The number of transcriptions of these songs reflects the popularity of the work. It is available in versions for orchestra, violin and piano, violin and orchestra, cello and piano, and solo piano' (Park 2013:10).
44. Les œuvres qui en englobent d'autres déjà connues ne peuvent se dissocier de l'histoire de cette dernière comme elles y ajouteront peut-être un nouveau chapitre si un succès s'impose.
45. Cette berceuse se révèle paradoxale : 'The narrator in the lyrics is sweet and tender, but the music is somewhat sad and gloomy' (Park 2013: 26). La transcription retient donc la tristesse de la chanson.
46. Il ne s'agit pas de la même berceuse, mais ses paroles évoquent la disparition de la mère:
- 'Ce petit moineau
N'a pas de mère,
N'a pas de mère, si,
N'a pas de mère, non,
[...].
Il est né d'une gitane
Qui l'a jeté à la rue [...]
- Ce petit enfant
N'a pas de berceau.
[...]' (Programme du concert *Passions ibériques*, Opéra de Lille, traducteur inconnu)
47. Entre autres, les œuvres des deux amis se retrouvent sur un CD intitulé *Canciones populares españolas* (2005) et elles ont été interprétées lors du même concert à l'Opéra de Lille.
48. Nattiez insiste avec raison pour ne pas considérer la musique comme un récit: il propose de parler de 'proto-récit musical' (Nattiez 2011).
49. Comparé à l'espagnol (langue maternelle de Picasso), au basque (langue des victimes), au français (langue aussi parlée par Picasso) ou à l'allemand (langue de Gieseke), l'anglais s'impose comme langue internationale sur le Web.
50. Fait notable quant à l'exploration de ce thème, Picasso a peint *La Nana* (1901), une toile un peu à la Toulouse Lautrec, mort la même année, illustrant une danseuse naine.
51. Pour une analyse des illusions créées par la culture participative sur le Web, voir Girard 2014.
52. Indissociable de l'œuvre de Picasso, la guitare figure dans nombre de ses toiles célèbres, dont *Le vieux guitariste aveugle* (1904) et *Guitare 'J'aime Eva'* (1912). Il a aussi 'bricolé' des collages de papier, de carton et de ficelles pour la représenter.
53. Dans cet article, l'analyse détaillée des éléments en jeu dans 'Picasso's *Guernica*' ne reflète pas la lecture de la plupart des cultistes, mais elle permet finalement de vérifier quelle facette intéresse les différents internautes qui en produisent des variantes.
54. Puisque ces capsules sont des variantes cultistes qui ne répondent pas forcément aux mêmes enjeux de cohérence que le travail de Gieseke, je souligne uniquement ici quelques transformations sans les interpréter plus longuement pour montrer que la transmédiabilité persiste, la plupart du temps, en raison de la *tension* que ces bricolages amplifient souvent. Présentées isolément dans un ordre aléatoire d'abord, les capsules seront ensuite considérées dans leur ensemble.
55. Aucune mention de l'auteur, David Bowie

56. Spécialiste du jazz, genre musical basé sur la variation et la participation, Béthune montre combien la culture hip-hop se construit comme l'avait prédit Benjamin quand il percevait un potentiel à la reproduction mécanisée des œuvres : le hip-hop construit une mosaïque à même des fragments d'œuvres connues; il mise sur ce jeu du collage, du recyclage et de la recontextualisation.

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Ways of Feeling: audience's meaning making in interactive documentary through an analysis of Fort McMoney

Patrícia Nogueira

The transition of documentary film to digital platforms has changed the cinematographic narrative. We still use the language of traditional films (take, perspective, camera movement, montage) and Bill Nichols' modes of documentary (2001) are still pertinent to non-fiction film making, but interactive documentary adds unprecedented complexity to film analysis. Interactivity is a crucial recent innovation of film language, which gives a radically new dimension to the documentary form. Interactive documentaries have a two-fold nature: they are both forms endowed with meaning and experience structures that enable meaningful actions, both on the syntagmatic and the paradigmatic axis. Employing a multimodal framework, which combines film analysis with the analysis of non-linear structures, the study of interactive documentary becomes the exploration of its narrative experience, the account of the ways it engages the audience in its constant (re)creation. The analysis of the National Film Board of Canada's documentary Fort McMoney (Dufresne 2013) approaches the interactive potential of meaning-making in a digital documentary, both in its aesthetics and its structure, by focusing on the experience of interaction.

KEYWORDS interactive documentary; interactivity; multimodality; audience participation

Introduction

The term 'interactive documentary' was originally used by Mitchell Whitelaw (2002) to describe documentaries that open up the narrative's structure, which is at the core of traditional documentary, and challenge the principle of narrative coherence. The non-linear structure of interactive documentaries allows the appearance of what Lev Manovich has called the 'spatial montage', which represents 'an alternative to traditional cinematic temporal montage, replacing traditional sequential mode with a spatial one' (2001: 322). Interactive documentaries are distinguished from traditional documentary films by virtue of the fact that, as interactive texts, they provide audiences with several possibilities, realities and interpretations. They are what Umberto Eco (1989) has called 'open works', a peculiar modern form of art that marks a radical shift in the relationship between artist and public, requiring of the audience a higher degree of collaboration and involvement than had ever been required by traditional art. In these digital artifacts audiences construct their own narrative while navigating through the available paths.

The rise of new technologies has provided audiences with greater power and autonomy (Jenkins 2006). No longer confined to watching and interpreting they are allowed to modify, interact with, choose from and contribute to the creation of a different narrative, a narrative that is rebuilt each time it is accessed. In an interactive documentary, the viewer enjoys several paths and possibilities of access, fostering a process of participatory meaning-making. Interactive documentaries therefore present us with new relationships between audience and text, and we must understand not only how audiences make sense of documentaries, but also how they interact with them and analyze the interaction's meaning.

This study aims to investigate how interactive documentary represents 'social reality', taking into account the fact that 'documentaries take up public issues from a social perspective' (Nichols: 163). Therefore, we use the *Fort McMoney* interactive documentary as a sample to analyze content, form and interactions, considering the three dimensions as connected and influencing one another. *Fort McMoney* is a game-based interactive documentary, with a non-linear and unstructured narrative, that addresses the environmental issues behind the oil industry. The documentary is inspired by the urban service area of Fort McMurray, in Alberta, Canada - the location of the world's second biggest oil sands. Such oil exploration entails several environmental, social and economic problems that *Fort McMoney* brings to light and tries to secure from the audience an active role in seeking a solution. Using a social semiotic approach, the study adopts a multimodal framework to analyze interactive documentaries and identifies the semiotic options available to audiences. The pathways created by users as the documentary unfolds and the *ways of feeling* they develop during the interaction are described as several senses that operate simultaneously.

Interactive Documentary Description

Interactive documentary-making is an emergent, continuously developing field, that brings together documentary filmmakers, designers and visual artists in the exploration and development of groundbreaking new forms of communication. 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). We may infer that an interactive documentary is a non-fiction film that allows the public to play an active role in the making of the narrative, providing thus an individualized experience. As for the term 'documentary', we adopt John Grierson's definition of 'the creative treatment of reality' (as cited by Hardy 1946: 11) which makes it clear that the documentary form addresses the world in which we live, but that it is not a mere report of reality. As Bill Nichols argues, despite its indexical relation with reality, documentary 'stands for a particular view of the world' (Nichols 2001: 20) with a unique authorial voice or point of view.

When we add interactivity to a documentary, 'the viewers themselves can be given the opportunity of choosing what material to see and in what order' (Miller 2004: 345). Despite its relatively short lifespan, interactive documentary has already been recognized as a genre, and the works produced over the last 15 years have taken a wide variety of forms, as described by Aston and Gaudenzi (2012). We may place within this genre works such as: *Waterlife* (McMahon 2009), that consists of a digital repository exploring the beauty of the Great Lakes and their degradation due to water pollution, incorporating videos, texts, images and sounds; *Journey to the End of Coal* (Bollendorff and Ségrétin 2008), which provides the audience with a journey through hyperlinks to the Chinese coal mines to witness the precarious working conditions, and combines still and moving images, texts and sounds; or even, *A Journal of Insomnia* (Choiniere et al 2013), which uses a participative strategy to gather videos, texts and graphics from the audience, in order to build a collective experience of insomnia.

The element of interactivity has allowed documentary to develop new modes of subjectivity, new approaches to its subject matter and new relationships with the audience. Just as Bill Nichols (2001) defined the fundamental modes of documentary for traditional non-fiction films according to their aesthetic approach to reality, Sandra Gaudenzi (2013) suggests a terminology for addressing interactive documentaries taking into consideration the kind of interactivity characterizing each work. The most common mode of interactive documentary, according to her, is the *Hypertext mode*. In this type of work, audiences are invited to trace their own path through multiple narrative choices. Similar to a CD or DVD menu structure, audiences can access a pre-existing archive of videos and other content in the order of their choice. 'With the increasing popularity of Web 2.0 platforms, documentary makers are increasingly inviting content created by fans' (O'Flynn 2012: 142) allowing audiences to participate in the documentary's narrative, adding opinions, stories and even video content. The documentaries that hold this possibility of gathering multiple inputs were defined by Gaudenzi as

operating in a *Participative mode*. Another mode of interactive documentary proposed by Gaudenzi is the *Experiential mode*. Such works consist in locational documentaries that invite participants traveling through a specific physical space to share their experience of the place.

Fort McMoney, the National Film Board of Canada's interactive documentary with its characteristic video game strategy, belongs to what Gaudenzi (2013) defines as the *Conversational mode*. This kind of documentaries are based on Human-Computer-Interaction and inspired by Andy Lippman's concept of interactivity, as described in her interview to Stewart Brand (1987). Lippman believed that interactivity should be grounded in five key principles: (i) *interruptibility*, i.e., the action can be interrupted at any time by the user; (ii) *graceful degradation*, i.e., an unanswered question should lead to a smooth transition; (iii) *limited look-ahead*, i.e., the platform should respond in real time to the user's orders; (iv) *no default*, i.e., the conversation must seem unpredictable and not based on formatted responses; and (v) *impression of infinite database*, i.e., the interaction must seem endless, to cause a perception in the user that possibilities extend to infinity.

Fort McMoney presents a very complex structure, since it offers audiences several narrative possibilities, as well as the opportunity to navigate backwards and forwards through the documentary's contents. The documentary's subject was inspired by the Athabasca oil sands, located in Fort McMurray, in Alberta, Canada. The film itself provides audiences with a sense of control over the city's virtual future, exploring Fort McMurray's social, economic, political and cultural dimensions through real footage. Over sixty days, a team from the National Film Board of Canada (in collaboration with the private company Toxa and the French television channel ARTE) filmed 2,000 hours at 22 of Fort McMurray's locations, under the direction of David Dufresne. This included 55 interviews with citizens, ranging from homeless people to the Canadian environment minister, and the chairman of the energy giant Total. Audiences are able to travel virtually around the city, meet residents and learn their opinion about certain predetermined issues. Despite presenting several different arguments in the discussion, the interactive documentary has a clearly marked position that could be transmitted through the voice of a spokesman of an action group: 'They call it development. We call it destruction.'

Fort McMurray is a multicultural community, attracting people from all parts of Canada and the world with the promise of well-paid jobs. However, not all immigrants succeed, and housing prices and rents are far higher than one would expect in such a remote area. The result is that a significant number of people live in caravans, and there is a high rate of homelessness and prostitution. In addition, the average temperature during the winter is -18 °C, with the lowest recorded temperature as -50.6 °C, making life difficult for those living in Fort McMurray. The interactive documentary *Fort McMoney* approaches all these issues and tries to secure from the audience an active role in seeking a solution to Fort McMurray's problems. Through the documentary, the viewer is able to visit several places in Fort McMurray, hear stories from its residents and interrogate the city's figures in the interviews.

David Dufresne had already explored the genre through a game strategy in his previous interactive documentary, *Prison Valley* (Dufresne and Brault 2010). *Fort McMoney* is stratified in levels, and has a progressive structure, according to which users must complete a set of tasks to gain access to certain areas. Each option chosen by the viewer has an impact on the city's life, for it is accompanied by an accumulation of points which, through their conversion into votes, enabling him to vote in the city's virtual referendum that will influence (together with other user options) Fort McMoney's development. More specifically, each action performed by the viewers earns them influence points that enable them to vote in referendums and thus contribute, as part of a collective experience with other viewers, to the transformation of Fort McMoney. The final outcome is a synthesis of the interaction of all the participants. Despite its interactivity and a strategy reminiscent of video games, *Fort McMoney* follows a documentary approach to the extent that, with the aim to engage audiences in the issue of sustainable economic development, it seeks to 'give a tangible representation to aspects of the world we already inhabit and share' (Nichols 2001: 1).

Framework

Several multimodal approaches have been developed in recent years, largely due to the interest of many researchers in the complex processes of meaning-making (see e.g. Kress 2009, 2010; Norris 2004, 2009; van Leeuwen 2005). In order to analyze interactive documentaries, we propose a framework based on a multimodal analysis, which derives from Halliday's (1978) social semiotic approach. Social semiotics presents a set of possibilities to analyze a narrative's content: namely, political acquaintances, formal composition and, mainly, the relationship between the audience's interpretation and the text. To some extent, social semiotics regards the film's conception and audience's interpretation as closely related. This approach fits especially well to an interactive documentary, since the latter comprises of a personalized narrative built by the audience at the moment of viewing. Furthermore, unlike traditional semiotics, 'social semiotics does not focus on "signs", but on social meaning and in the entire processes ("texts")'(van Leeuwen and Jewitt 2008: 187). By employing, moreover, the concept of 'visual grammar', as proposed by Kress and van Leeuwen (2006), we aim to research how these structures are used by contemporary image producers to construct meaning. The concept stems from systemic-functional linguistics as theorized by Halliday (1994), and views language as a system of potential meanings, as an open number of semantic choices that are related directly to the social contexts in which the language is used.

By highlighting the multifunctional character of language, Halliday (1978) drew up a systemic-functional grammar, identifying three kinds of meaning, or rather three main 'metafunctions', always held simultaneously in every form of communication. These are: the *ideational metafunction*, which regards the type of ongoing activity undertaken by the transitivity system; the *interpersonal metafunction*, which relates to the type of relationship established between the participants, and is expressed through system mode and modality; and the *textual metafunction*, which concerns the way the text organizes ideational and interpersonal metafunctions by a theme system.

In their analysis of multimodal texts, Kress and van Leeuwen (2006) outlined a visual grammar by adapting the Hallidayan theoretical notion of metafunctions to the visual semiotic mode. From this perspective, the ideational, interpersonal and textual metafunctions are now called 'representational' (an idea or activity carried out by the participants represented in the image), 'interactive' (they perform the type of interaction established between participants, spectators and image producers), and 'compositional' (they perform coherence and cohesion between the informational elements of the image), respectively. According to Kress and van Leeuwen (2006), the term 'grammar' is associated with the idea of a set of rules that must be obeyed, in the sense of socially acceptable norms. The concept, therefore, of 'visual grammar' aims to describe the way in which individuals, objects and places are combined in a constitutive fullness of meaning. Thus, the social semiotic perspective views rules as socially produced and changeable through social interaction. Such a conception contradicts the traditional definition of semiotics inherited from Saussure, since he considered rules as being fixed and unchangeable.

From a social semiotic perspective, as well, Jewitt (2006) indicates four theoretical bases on which the multimodal approach is built. The first basic assumption is that meanings are produced, distributed, received, interpreted and reproduced through a series of communicative and representational modes. The second assumption states that all semiotic modes, in addition to speech and writing, are shaped by their cultural, historical and social uses in order to perform different forms of communicative work. The third assumption refers to the fact that people manage meanings by selecting and setting different modes, so that the interaction between these resources is extremely significant in the production of new meanings. The fourth assumption, in turn, stresses that the meanings of the signs made by the semiotic modes are social, i.e., constituted by the norms and rules operating at the time of the sign's production. In the case of an interactive documentary we can argue that such meanings are influenced by the interests and motivations of a sign's producer (i.e., director, designer, coder) in a specific social context, who selects, adapts and reshapes meanings through a continuous

process of reading/interpretation of the sign. Such a research approach allows the investigation of the interactions between participants (the documentary's producers and audiences) and analysis of the main compositional structures on a syntagmatic dimension, considering the three metafunctions.

In our examination of the rhizomatic structure of *Fort McMone*y, we combine Kress and van Leeuwen's (2006) multimodal social semiotic analysis, and a diagram adapted from the non-linear model proposed by Martinec and van Leeuwen (2009). Such an approach comprises two main objects of analysis: a documentary film that is presented in as a non-linear, fragmented narrative, and an interface that enables readers to 'travel' from one film segment to another using hyperlinks.

From a cinematic perspective, we must consider that the ideational metafunction relates to world events, i.e., the actions, events and state of things, consisting in the documentary's *mise en scène*. The interpersonal metafunction, on the other hand, concerns the social relations between the individuals involved in the interaction, and should, therefore, be analyzed through the proxemics of the image. Especially useful, to this purpose, are Kress and van Leeuwen's (2006) definition of perspective, distance, coding orientation and visual focus or gaze. These elements of visual grammar concern the establishment of a closer or more distant relationship between the producer of the image and the viewer, determining different attitudes between participants and creating greater or lesser involvement between them. The organization of these elements themselves within the frame comprises a crucial dimension of meaning. For example, the willingness of participants represented in the visual space of the frame can be used by the image producer to give a greater or lesser focus to the required information.

The textual metafunction concerns the cohesion and coherence of a text's form, both in relation to the internal organization of the elements and in relation to the environment in which the text is created — thus, narrative and editing will be considered at this level of meaning. However, we could not interpret interactive documentary through film analysis alone:

In interactive media there are new variables: code, interfaces, algorithms and an active user. [...] The interactive documentary is therefore a fluid form, not a fixed one. It is the result of interconnections that are dynamic, real time and adaptive. An interactive documentary as an independent and stand-alone artifact does not exist. It is always related to heterogeneous components. (Gaudenzi 2013: 74)

In this study, Human-Computer-Interaction should be perceived as a form of communication mediated by a computer in which the user establishes a conversation with the machine and ultimately, we may infer, with the documentary's author. This mediation occurs through an interface (i.e., through a designer), which is also part of the communication process and endowed with meaning.

It is likely that signs in text, images and sounds are meant to be interpreted, since they produce effects. Similarly, the structure and design allowing audiences access to the interactive documentary's content have an effect on the ways in which audiences make sense of interactive documentaries. Therefore, we propose the following framework for analyzing interactive documentaries:

Objects of analysis	Ideational metafunction	Interpersonal metafunction	Textual metafunction
documentary film	actions / <i>mise en scène</i>	proxemics	composition / montage
interactivity		diagram of non-linear model (if applicable)	
interface	signifier / signified	elements within the screen	address and expectations

Table 1: Framework for the analysis of three multimedia elements, according to three metafunctions

If we consider Halliday's metafunctions in analyzing the interface, we will find that ideational meaning comprises a signifier and a signified deriving from the interface. On the interpersonal level, we will examine the location of the hyperlink within the screen and the textual metafunction to consider whether the sign addresses the user directly or indirectly, and what kind of expectations are raised.

Although we placed *Fort McMoney* in the *Conversational Mode* (considering the kind of interactivity it allows), audiences make their choices through clicks. In an interactive documentary audiences are expected to be active, since, irrespective of whether the hyperlink is represented through words, images, shapes or colors, its signifier is meant to be manipulated to perform its interactive function. Therefore, audiences must activate the hyperlink to create meaning. When it is combined with other elements within a syntagm of the text displayed on the screen (and also paradigmatically), it functions through selection, thus enabling the actualization of one of several possible textual realizations or paths. In order to access content, that is, audiences must choose hyperlinks and create pathways. The latter are determined by a number of screens, which are constituted by various elements — such as verbal, written, sound and multimodal or hypertext systems — that are interchangeable and represented by different, but related and integrated, semiotic systems.

In approaching *Fort McMoney* as a networked non-linear model (Martinec & Leeuwen 2009) we draw a diagram that reveals the documentary's structure and allows us to understand how audiences 'travel' through the film. Through the documentary's analysis, we demonstrate that the organization of information creates particular semantic relations between its constitutive elements; otherwise, the authors' diagram would not make sense. Therefore, the structure can be perceived as a mediative system between the film and the interface, one that enables audiences to create a narrative throughout the navigation process.

Fort McMoney's Analysis

When we arrive at Fort McMoney, we are confronted with a cold and inhospitable place. The first wireframe in the interface, which acts as a gateway to Fort McMoney, is an image of an icy landscape with vapour, resembling an explosion (Figure 1). The sound of wind blowing makes us snuggle in our coats and get ready for the experience to follow. The introductory video segment is a travelling movement filmed from a car's point of view that drives us to the first level. The first shots, as well as others during the experience, resemble the opening sequence of Michelangelo Antonioni's *Il Deserto Rosso* (1964), which presents the industrial structures of a petrochemical plant (Figures 2 and 3). A female narrator serves as a guide to explain rules and provide clues. This female voice addresses the viewer directly, in an apocalyptic tone: 'you have reached the end of the road at the world's edge'. In other moments, the voice has a more informative tone, explaining to the audience the documentary game's rules or providing background information about what has happened and is happening. The narrator addresses viewers in the second person, assigning thus to them the role of the main character, and summoning them to take control. Sentences such as 'your mission?' and 'Fort McMoney's faith is in your hands' reinforce the feeling that audience's actions and choices cause the narrative to move forward. At certain moments, there is music to create a more immersive environment and create the emotional mood intended by the director.

Perhaps because *Fort McMoney* has a game-like structure, David Dufresne felt the need to draw the audience's attention to the indexical nature of the interactive documentary: 'you are embarking on a documentary game where everything is real: the places, the events, the characters...', since an 'indexical image serves as empirical or factual evidence' (Nichols 2001: 125). Furthermore, this statement is used as a validation criterion because 'wherever it is possible to argue about whether something is "true" or "real", there will also be signifiers for "truth" and "reality"' (van Leeuwen 2004: 16).



Figure 1. Fort McMurray's wireframe



Figure 2. Fort McMurray's petrochemical plant



Figure 3. Still frame from *Il Deserto Rosso*

Fort McMurray is structured around different levels in the same way as a video game, enabling audiences to go forward in the documentary's narrative and attain greater involvement in decisions considering the city's future, as they deepen their knowledge and interact in civil life. At the beginning of each level, we access an interface of still images representing public places at Fort McMurray, in a 160o view that rolls right and left, as if viewers actually turn their head and look around. Therefore, interactive signs (or buttons) are mostly placed at the screen's centre, or their position depend on the viewer and their choice to roll the wireframe right and left (Figure 4 and 5). Furthermore, all subjects that embody an interactive sign address the audience directly, facing the camera, with a view 'more interactional and emotive than representational' (Kress and van Leeuwen 2006: 89), to establish an imaginary relationship with audiences. In each middle screen, there are several possibilities – from getting to know some individuals, to accessing buildings or a news media archive, or picking up clues with information for the next levels (Figure 6).



Figure 4. Subject that embodies an interactive sign



Figure 5. Subject that embodies an interactive sign

Characters are placed in the image's centre, looking at the audience in a long shot from an eye-level camera angle, waiting to be chosen for interaction. On the other hand, archives and small documents with game clues are scattered over the ground. This director's decision emphasizes the human stories and experiences over the additional materials, and makes them less obvious. At the end of the first level, audiences are interpellated by

the police patrol and invited to register to keep a record of their interactions and scores. Without registration, the user has no access to the second level.



Figure 6 . Clues scattered over the ground



Figure 7. Walking alongside subjects (front)



Figure 8. Walking alongside subjects (back)

Among the other elements incorporated into *Fort McMurray* we find documentary segments, during which audiences are not able to perform an action, except to pause the playback and go forward to the next stage. Not all documentary segments can be regarded as a scene, as some of them occur in more than one location, but they may be considered as a sequence since they are related to a certain character. This element has an informative function (i.e., it mainly offers information about places, lives and conditions) and an argumentative function (i.e. it presents topics advocated in a particular situation).

Most documentary segments begin with establishing shots, introducing the viewer to the place inhabited by the character. Subsequently, the audience follows the character in an everyday-life situation, such as walking or driving a car. The character is filmed mostly in a medium sized shot, creating the sense that we are close enough to have a chat with them, while we listen to a voice-over relating the subject's story of their life experience at Fort McMurray. David Dufresne presents several medium shots from different angles (front, side and mainly back) filmed with a handheld camera to follow the subject's journey (Figure 7 and 8). Audiences have the feeling of walking alongside the subjects while they talk, and thus the sense of a shared experience and moment. Sound combines the character's interview as voice-over, diegetic direct sound and background music in order to give the audience a more immersive experience. When we accompany a character who travels by car, traveling images frequently show the landscape outside.



Figure 9. Fort McMurray's icy landscape



Figure 10. Still frame from *Fargo*

In fact, landscapes are of major significance in the documentary's narrative, whether they are natural scenarios or images of an urban highway in the city's downtown. There are several moments when we behold Fort McMurray's surroundings through establishing shots, extreme long shots and traveling shots from the car's point of view, both in documentary video segments and in some videos that transport us between places or levels. The more we move away from the city and go towards its outskirts, the wider the shots become; this technique reinforces the feeling of how cold and inhospitable the region is. Some of the shots remind us of images from *Fargo* (Coen and Coen 1996), with its icy landscapes and deserted roads (Figures 9 and 10). The petrochemical plant itself is filmed in extreme wide shots to underscore the largeness and mightiness of the oil company, imposing a sense of distance and detachment on the viewer.

When the viewer encounters institutional representatives (mayor, minister, doctor, environmental activist), they are able to choose the questions that will be answered by the subjects. However, options are constrained to three topics predetermined by the director and could eventually be deepened in a more elaborate way if the viewer wishes. Regardless of whether the interview takes place at the City Hall, a council building or at a coffee shop, they have a very formal approach, with the interviewee filmed in a close up or in a middle-sized shot, as if talking to a news reporter (Figure 11). Few documentary segments, on the other hand, take place during the night. Nevertheless, these moments create a closer and more intimate relationship with the characters, as well as simulating different times of day in order to provide the impression of the passage of time. At the end of each documentary segment, the narrator provides audiences with instructions about their subsequent options. From time to time, the voice reminds the viewers that 'your choice will affect your experience', in order to provide a sense of empowerment and make the audience aware of the ultimate goal.

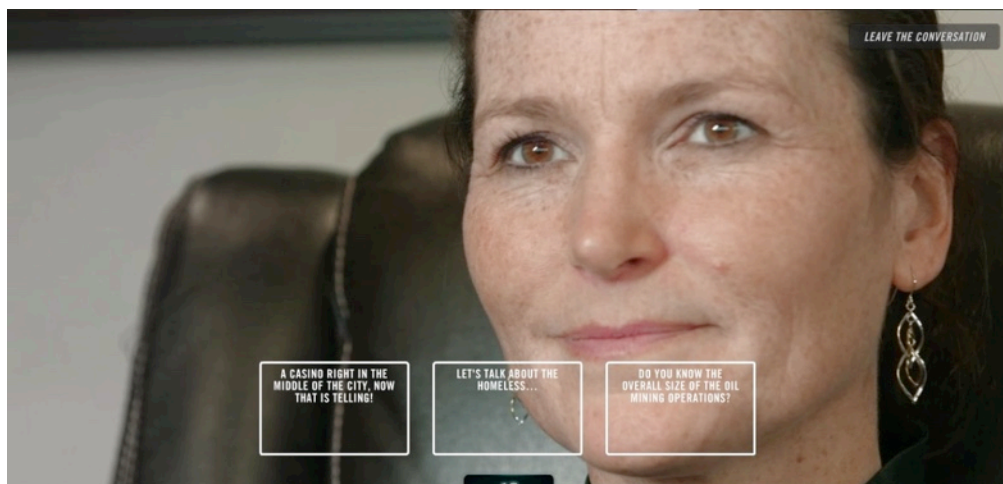


Figure 11. Interview with the City Mayor

As regards the interface, audiences are able to move forward in the story and build their own narrative through 'interactive signs' (Andersen 1997), since they can be directly manipulated by users. Interactive signs trigger actions in response to user interaction, as a means of providing feedback to the actions performed by users, by clicking on the characters or additional signs on the screen. In general, these signs change transient appearance and become other signs; i.e., each time the viewer clicks on a button (even if it does not have the appearance of a button), something happens to show them that their decision is ongoing. This behavior is critical in providing feedback on the user's action while it is being carried out. The sign button has the handling characteristics illustrated by the user's action of clicking on it and, as a result, triggering an action in the narrative.

Due to the great significance of the interactive documentary's structure, we have adapted the social semiotic model for multimodal meaning analysis, presented by Martinec and van Leeuwen (2009), in order to transform *Fort McMoney* into a diagram with a semantic structure. With this approach, we imply that the interactive documentary's different modalities (film, interface, still image, sound, text) can be converted into a meaningful whole. As noted by Martinec and van Leeuwen (2009) the choice of a non-linear model is motivated by the designer's goal and strategy.

In analyzing *Fort McMoney*'s navigational structure, which was designed by David Dufresne himself (Figure 12), we find a complex combination of nodes and connections aimed at creating a range of communication paths. The diagram drawn from the different navigation possibilities can be considered as a networked non-linear model (Martinec and van Leeuwen 2009), consisting of non-hierarchical and non-centralized information, as well as plenty of transitions between the documentary segments and the different levels. Therefore, as Jewitt argues 'there is no internal grammar to be broken — there is no essential "wrong order" because there is no prior reading path' (2004: 187). Such an argument coincides with Lev Manovich's perspective, who considers that 'new media objects do not tell stories; they don't have a beginning or an end; in fact, they don't have any development, thematically, formally or otherwise which would organize their elements into a sequence' (Manovich 2001: 218). He also argues that while cinema privileges narrative as the key form of cultural expression of the modern age, the computer age introduces the database through which the user can perform various operations: view, navigate, search.

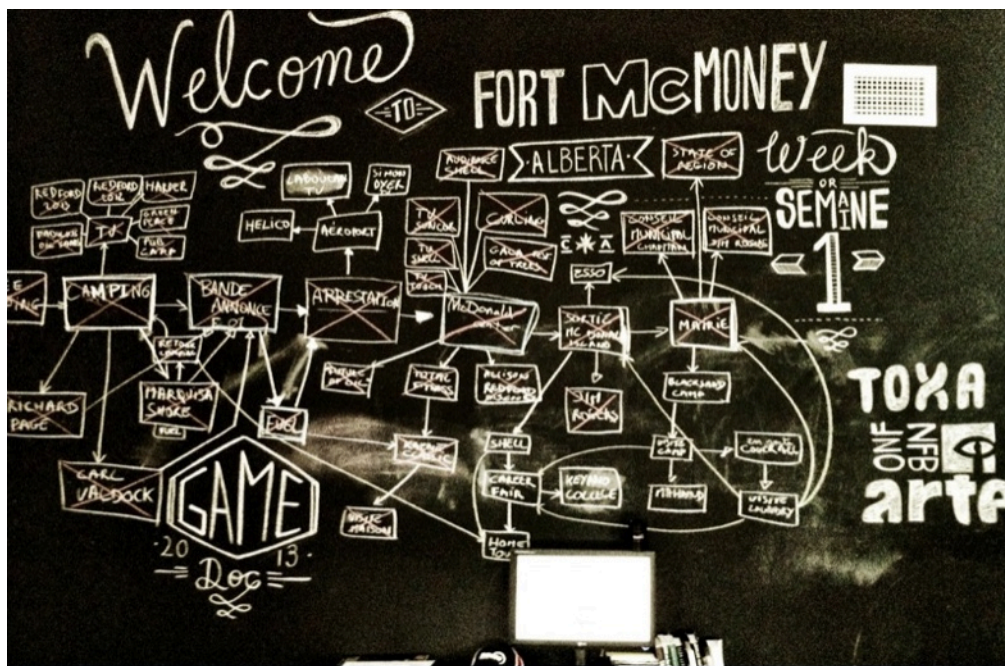


Figure 12. Fort McMoney's navigation structure designed by David Dufresne

In the case of these new digital artifacts we must make a distinction between the content (video, audio, texts, graphics, etc.) and the narrative, which represents the virtual path followed by audiences to access the content (Manovich 2001). Every interactive documentary contains, therefore, a significant amount of content which is not necessarily accessed. The viewer is allowed to navigate randomly through the content and chose specific information, selecting and appropriating the narrative which eventually interests them most. As regards *Fort McMoney*, the audience is given information about events, characters and the location/ environment, providing the audience with the context for their actions. Hence, the narrative establishes the viewers' position within it and the actions they are expected to take as a result. The most interesting aspect of this dynamic

content organization is the potential it creates to explore this virtual world as much as possible. Multiple storylines may be followed, leading the audience to a wide variety of content organization.

There are, however, certain steps that the user must follow in order to achieve the ultimate goal, which is still predetermined by the documentary director. In this sense, there are certain patterns to be found in the navigation structure. First, each interface level may be considered a node, connected to different documentary segments in order to allow audiences to develop their personalized paths. Moreover, some documentary segments have several connections to both nodes and other documentary segments. Second, the connections are designed to diversify the semantic values of each connection as much as possible — i.e., documentary segments are organized within patterns (public/private place; ordinary citizen/ institutional spokesman; urban/ rural landscapes) which are presented to audiences in an interlaced way with the purpose of creating a feeling of randomness. Third, and finally, there are certain predetermined landmarks, which must be revealed in order to accomplish the ultimate goal.

We must not expect *Fort McMoney*'s narrative to be structured in terms of a narrative arc or climax. The interactive documentary's structure is designed to offer audience a series of multiple climaxes that culminate in the documentary's conclusion. All the elements in *Fort McMoney*'s story lead audiences to an ultimate goal, whose accomplishment presupposes that viewers use everything they have learned and felt in the process.

Final Considerations

Fort McMoney is designed to be a journey, a roadmap through the city, presenting the viewer with several arguments to help them make informed decisions. It consists, primarily, in a non-linear narrative that progresses dynamically throughout the viewing experience. Its characteristic interactivity opens up the possibility of exploring several narrative paths that may occur simultaneously, in parallel or dynamically. At the same time, it operates as a matrix combination that enables choices and perspectives limited only by the existing database. Despite the viewers' progression towards a goal, defined by the documentary's director, each is free to find his or her own path through the process.

The interactive documentary provides viewers with narrative control and the possibility of choosing certain aspects of the environment — above all, the power to imagine an alternative Fort McMurray. This strategy provides audiences with a *sense of control* over the narrative's construction and, ultimately, the city's future. Through their actions and interactions they produce, transform, and continuously develop heterogeneous and interlinked spaces. The non-linear narrative of *Fort McMoney* may create a feeling of roaming around aimlessly. The interactive format demands from the viewer a certain degree of mental mapping to keep track of space both in Fort McMurray and within the documentary's structure. *Fort McMoney*'s indexical relation to reality provides audiences with the feeling of physically visiting the place and traveling around Fort McMurray, providing audiences with a *sense of place*.

This specific digital artifact is filmed in such a way as to place audiences in the role of the leading character. Despite all the different shot sizes, camera angles and movements, the camera always takes a first-person point of view, which encourages the identification of the audience with an active role in the documentary, and cultivates the feeling that the camera embodies the viewer's exploring gaze. Point of view shots permit a strong identification with the other characters on the screen, as well, in what Metz (1982) considers to be the process of 'spectatorial identification'. Such an approach offers the illusion of personal power and control over the world on the screen. *Fort McMoney* encourages such identification by inviting viewers to identify directly with the interactive documentary's protagonist, since they are actually in control and able to influence the documentary's leading character. The tasks performed by the audiences in the documentary reflect the development of their knowledge and skills, and contribute to their ego as a reward for their commitment.

Allowing the audience member a chance to act heroically, behave admirably and achieve the desired outcome may be the keystone in providing them with a positive *sense of self*.

Alternatively, we may consider the possibility of an incentive for the ego in seeking to perform better in comparison with others, in creating social bonds as affiliation and solidarity and pursuing social recognition. *Fort McMoney* uses a collaborative strategy to engage the audience's participation, and offers users the opportunity of constructing the city's future collectively. Audience members influence *Fort McMoney's* virtual destiny but they must work together, and the final result may be considered as a shared construction of a virtual space of signification, which each user attempts to shape according to his social and political views. David Dufresne (2013) says that *Fort McMoney* is 'a platform for direct democracy', what Pierre Lévy (1997) would consider the result of a 'collective intelligence', as 'a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills' (Lévy 1997: 13). Therefore, we may conclude that *Fort McMoney* strengthens community feeling and provides users with a *sense of belonging*. Furthermore, as Jewitt states, 'the potential of the medium to link texts via visual hyperlinks enables the reader to move between the entity character in the "fictional domain" of the novel and the entity character in a "factual domain" beyond the novel' (Jewitt 2004: 185). As such, the form strengthens the bonds between the interactive documentary and the audience. All these choices, however, are made within a closed database of footage, archive material and pre-selected arguments that are made available to the public. Although audiences are free to choose and create their own path through the contents, their choices are compromised by contents (in the documentary database), by how they are presented (via the interface) and by their own social and personal perspectives.

We conclude that reality is perhaps one of the best raw materials for interactivity and that 'true stories may be the crucial "content" that makes for a compelling new media experience' (Whitelaw 2002). Interactivity adds complexity to the documentary perspective and narrative, and fosters a new relation between producer, film and audience. We must be aware, however, that we are dealing with a novel kind of narratives, constructed and delivered through a new medium, which engage the audience in new, simultaneously pre-arranged yet also radically unpredictable ways. The investigation of these innovative and still relatively uncharted artifacts is a challenge that needs to be addressed at all the multiple levels of their construction and reception.

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My Friend is a WWI Soldier: A Semiopragmatic Approach to Docufictions on Social Networks

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At the beginning of the twentieth-first century, notable for the triumph of both fiction and a taste for reality (Veyrat-Masson 2008), interactive documentary-dramas appeared on social networks. These Internet-based audiovisual productions invite semiotics to reconsider its tools in order to grasp their complex, hybrid nature, above and beyond the binary opposition of reality and fiction. After considering the semiotic systems which characterize social networks and condition enunciation (Van Dijck, 2013), we proceed to examine the Léon Vivien, Louis Castel and Little Suzon documentary-dramas from a semio-pragmatic point of view. We will examine the relationship between reality, fiction and realism on the basis of the semiopragmatic models developed by Hanot (2002) and Jost (2001) in order to analyse these audiovisual productions on four levels: profilmic, plastic, iconic and diegetic. By adapting these models to Internet, we will be able to identify the authenticating and fictional strategies employed in such online productions to make the archive images waver between the status of index and icon.

KEYWORDS Online docufictions; semiopragmatics; Facebook

Introduction

On May 25, 2013, the death of the fictional veteran Léon Vivien (fictionally occurring in 1915) was announced on his Facebook page. Over 800 people wrote a message on his page, expressing their sadness, some even to the point of tears, at learning of Léon's death, a person to whom people felt extremely close. The message posted on Léon Vivien's page by the Musée de la Grande Guerre (Pays de Meaux, France) bears witness to the scale of emotion which this virtual soldier had generated: 'The images and words had gradually created invisible links between you and him. Links so strong that thousands of you cheered at the birth of his son and cried on the day of his death. The bullet which killed him on a grey morning in May proved that a projectile one hundred years away can also strike you in the very heart.'

Over several months in spring 2013, on an almost daily basis, the DDB communication agency published online messages posted by the character Léon Vivien, devised on behalf of the Meaux Museum of the Great War. The story, illustrated by a large number of (audio-) visual documents, is based on the museum's substantial collection. Just as on any friend's Facebook page, Internet users reacted to Vivien's messages by commenting day after day. All in all, nearly 7,000 messages were posted by followers and 60,000 people became 'fans' of Léon's page.

While most Internet users recognised the fictional nature of this Facebook World War I experience, some approached it as a true story. Someone actually lambasted a comment which claimed that Leon was fictional: 'These words bewilder me. He is not a fictional character!!!! This is a person who lived through the First World War and wrote about and photographed what he saw... When you don't know what the stakes are, it's best to keep quiet!!!!'. Others wanted to know where Léon Vivien had been buried. While these misunderstandings were a relatively rare occurrence, it is striking to see how this Facebook experience managed to generate a singularly close relationship with the Internet users who followed Vivien on a daily basis; some of them

developed real emotional attachment to a character that never existed. Numerous comments, such as ‘Rest in peace my dear Léon, I will miss you’, ‘Oh noooooooooo, Léon!!! Why did he die!! F***ing war!! :(’ or ‘Léon, where are you??! You can’t be dead, no!’ illustrate such strong sentiment.

Several months later, the Caen Mémorial created the bilingual French-English story for Facebook and Twitter of the fictional G.I. Louis Castel, who participated in the D-Day landings. He told of his fictional adventures between December 9, 1943 and July 6, 1944. In 2015, the same Mémorial launched the story of little Suzon with the aim of heightening children's awareness of the World War II. Suzon is the nickname of Suzanne Thomas, a nine-year-old girl who lives in Paris when the war breaks out in 1939. Little Suzon, unlike Vivien, Castel or any member of Facebook, does not write posts intended for all the members of her Facebook network; she uses her Facebook page as a private journal and often begins her posts with ‘Dear journal’. In this case, a feeling of closeness to Suzon is constructed by means of a *mise en abyme*. While Léon Vivien and Louis Castel used their Facebook page to post public messages, her private journal serves as an intermediary between her and her followers. This *mise en abyme* may create some distance, but, the diary-form makes it possible to get to know her intimately by disclosing personal information normally shown to no one.

In this article, we suggest analysing the phenomenon of docufiction on social networking websites through a twofold semiopragmatic approach. First, we will analyse these docufictions’ contextual constraints as well as the engineering of social networks which influences both the interactions between these docufictions’ characters and Internet users and their reception. Finally, we will examine the textual constraints at the profilmic, plastic, iconic and diegetic levels.

Towards a semiopragmatic approach to online docufictions

The difference between fiction and non-fiction has generated considerable debate, revived over time by the emergence of so-called ‘hybrid’ forms. We follow Lioult’s approach (2004), which considers it important to move past the paradigm of the confusion of genres. He builds on Ponch, who maintains that while the barriers between fiction and non-fiction may be fixed, the intentions in a mixed work, ‘in the hybrid, the distinction between fiction and non-fiction does not break down. All that dissolve are somebody’s inhibitions against making in which both assertive and fiction-making illocutionary force are signaled.’ (Ponch 1999: 158)

In docufictions on the Web, not only are the intentions mixed, but they also subvert the traditional hierarchy between fiction and non-fiction. Indeed, they intensify the reversal observed by Isabelle Veyrat-Masson in televised docufictions: ‘The role of fiction is completely reversed with respect to its primary function and its initial recreational usage: we have moved from recreation to re-creation. [...] In docufiction, archives are illuminated by fiction; the traditional relationships between the two regimes of truth are reversed’ (2008: 120-126, our translation).

In 1999 Shaeffer wrote that ‘of all the currently known mimetic representation devices, cinema is without doubt that which most easily manages to produce effects of this type’ (quoted in Lioult 2004: 31, our translation), which is to say, perceptive illusions and shared recreational pretenses, created in order to entertain rather than trick the spectator. Nowadays, docufictions on the Web question this assertion. Indeed, it would appear that they allow for the development of perceptive illusions and shared recreational pretenses which are at least as effective as those exploited in films, due to the mechanism of the social networks which host them (cf. supra) and their particular narrative strategies. Our attempt to understand Vivien’s, Castel’s and Suzon’s docufictions is based on a semiopragmatic model which does not take meaning as determined ontologically, by internal semantic constraints, but constructed *a posteriori*, by each Facebook member, and is thus not fixed in advance. Semiopragmatics focuses, effectively, on reception, as Christian Metz’s reminds us in his famous quotation:

The path that the semiotician follows is (ideally) parallel to that of the film *viewer*. It is the path of 'reading', not of 'composition'. But the semiotician forces himself to make explicit this procedure, step by step, while the viewer practices it directly and implicitly, wanting above all 'to understand the film'. The semiotician, for his part, would also like to be able to understand how film is understood. (Metz 1974, quoted in Buckland 2000: 79)

Following this standpoint, our research aims to examine how these docufictions construct their followers' reception. To do so, we will analyse 'contextual' and 'textual' constraints (Odin 1994: 39, quoted in Buckland 2000: 97), which condition each follower's reception and channel diversity in apprehension. In our case study, contextual constraints lie in Facebook's technical and ideological constraints. We will see how sharing, liking, performing one's identity and narrating on Facebook condition each follower's reception. Contextual constraints also lie in the 'promise' (Jost 2009) underlying the press releases. Through the latter, the creators of these docufictions promise a certain type of docufiction, which mixes facts and fiction, and by so doing, they implicitly condition reception and construct their ideal audience. Next to these contextual constraints, we will also analyse the docufictions' textual constraints. The latter can be considered as textual cues influencing reception. We will see that these cues navigate between fact and fiction by means of a semiopragmatic method, which is structured on four levels: profilmic, plastic, iconic and diegetic (Hanot 2002).

The promise: contextual constraints in press releases

Before analysing the Facebook page as such, let us study its 'promise' (Jost 2009: 48). Jost's notion of promise was created for television programs but it can be applied to online docufictions, as well. The promise is a contextual cue which leads viewers towards specific modes of reception. Television genres fulfil promises: naming this or that film a 'comedy' for example, implies a promise of fun and this conditions the viewer's reception. Such a funny feature can be ontologically or pragmatically determined: if we see images of a man slipping on a banana skin, we can find it funny in the context of hidden camera, although quite ridiculous in a comedy. Jost goes beyond the various genres (comedy, docufiction, reality TV, etc.) suggesting that they all relate to three general categories he calls 'worlds': the *real*, which refers to the real world (eg. the news); the *fictional*, which implies suspension of disbelief, and the *playful*, which is a combination of the first two and is based on complying with a certain set of rules. Such a standpoint raises the following question about online docufictions: to which 'world' (real, fictional or playful) do their producers actually relate them? In other words, does their promise involve an authentic, fictional or playful relation to the events?

To answer this question, let us first examine the press release published when the Léon Vivien page was launched. The April 10, 2013 press release includes formulations referring to both the real and the fictional. The release insists on the 'patronage by a historian' and defines this experience as a 'formidable instrument of knowledge and collective memory' (our translation). The fictional dimension, however, is also highlighted when the communication agency states that it 'imagined what a young Frenchman might have posted on a day-to-day basis if the social network had existed a century ago'. Next to this simultaneous evocation of the categories of the real and the fictional, the ambiguity of the promise delivered by the press is further intensified by its emphasis on the 'genuine human story'; an expression which functions almost as an oxymoron, combining the apparently contradictory ideas of the 'genuine', as it relates to historical truth, and the 'story', which relates to fictional conventions. If the promise seems from the beginning a little ambiguous, subsequently it proved also somewhat changeable, since it was revised during the development of the project.

The last message posted on the Facebook page (on May 24, 2013), written no longer by Vivien but by the Museum itself, suggests a rather more modest objective, whose focus is on empathic understanding: 'This page had no other goal than making you feel and share, as closely as possible, what the soldiers of [19]14 lived through, as

well as their relatives back home. Your thousands of comments, coming straight from the heart, showed us that we succeeded’.

Franck Moulin, Communication Director of the Caen Mémorial, insists on the accuracy of the Louis Castel narrative, which is built upon several true stories: ‘His story is a puzzle of true stories drawn from testimonies found in our archives or in books. The historian Emmanuel Thiébot wrote the historical plot from beginning to end, to which a dramatic fictional layer was added to give the character body’ (quoted in *L’Express* and AFP 2013, our translation). He also affirms that ‘there is a romanesque layer on top of the story, but nothing is invented.’ (quoted in Le Cain 2013). Such seemingly contradictory statements amplify the promise’s ambiguity.

In terms of Castel’s adventure, the Mémorial also highlights the shared emotional experience involved in spending several weeks at the G.I.’s side: ‘Thank You. Thank you to everyone who has followed Louis Castel, the GI who displayed such strong enthusiasm in his commitment to the Liberation of France and Europe. [...] Louis Castel could not have existed without your encouragement and your interest in history. There were over 27.300 of you following Louis on Facebook, and more than 7.700 on Twitter, showing your solidarity and your gratitude every day. In “liking”, commenting, and sharing, you have contributed to this adventure’ (Mémorial de Caen on Louis Castel’s Facebook page).

The issue, then, is not about the function of Vivien and Castel as learning devices but as a touching, immediate, and real experience. Quite evidently, the promise made to the Internet user is plural, meandering between offering knowledge, emotional experience, and fictional entertainment.

Technical and ideological constraints of online docufictions : how to share, like, perform one’s identity and narrate on Facebook

In order to create a narrative to which Internet users can react, the developers of docufictions on social websites may use the asset of these sites’ specific mechanism. José Van Dijck (2013: 65) reminds us that ‘sharing, friending and liking are powerful ideological concepts whose impact reaches beyond Facebook proper into all corners of culture, affecting the very fabric of sociality’. Let us briefly see how the Facebook company conditions how to share, like, perform one’s identity and narrate on its social platform.

Firstly, the propensity of Facebook to share content through networking allows for raising awareness about Léon Vivien’s page. When one or more friends have ‘liked’ the page, it appears in the top right hand corner of one’s personal Facebook, amongst the recommended pages. Facebook’s ‘tribal functioning’ (Benoit 2013: 82, our translation), in which content is shared between peers, determines therefore access to information, at the risk of standardizing the types of content which are diffused. Coming into contact with these docufiction characters is therefore a question of our friends’ affinities as well as of our own areas of interest.

Social marketing on Facebook tends to make advertisements look like members’ posts; for example, when they use interactive strategies and seem to ask questions like ‘what nicknames do you use to call your children?’ asked by a baby diaper company. Such assimilation of Facebook social codes is also at work with these docufictions, which resemble friends’ profile pages. One’s newsfeed is thus filled with a mix – sometimes hardly visible – of fictional, business and non-fictional links. The majority of non-fictional posts creates a general impression of authenticity, which benefits docufictions.

Secondly, Facebook can be considered as a ‘kissland’ (Benoit 2012: 47, our translation), in which a cool and relativistic attitude is favoured, leaving little room for differences of opinion. The social network offers different tools to help nourish friendships, focusing for the main part on the phatic function of communication: the ‘like’ button (whose ‘dislike’ counterpart does not exist) and the now defunct means of ‘poking’ someone, which amounts to virtually entering into physical contact with someone, are two well-known examples. This may explain why more than 60.000 people liked Vivien’s page. That said, it doesn’t mean that they all followed

his adventures; they may have ‘liked’ the page once but didn’t really follow him and didn’t click on the ‘unfollow’ button. It also appears that many Internet users only ‘liked’ his messages but never commented on them. As Barry Schnitt, Facebook’s director of corporate communications and public policy has stated, Facebook favours empathetic contact, ‘by making the world more open and connected, we’re expanding understanding between people and making the world a more empathetic place’ (quoted in Kirkpatrick 2009). Empathy for Léon Vivien or Louis Castel is demonstrated in a kind of interpersonal relationship with the Internet user, who develops a feeling of intimacy and closeness to the fictional soldier. This would be all the more valid for older Internet users who tend to maintain interpersonal interactions on Facebook, rather than more collective relationships, for example via messages aimed at all of their friends (MacAndrew and Sun Jeong 2012: 2360).

Thirdly, Facebook conditions how one’s performs one’s social identity via one’s posts and comments. The experienced intimacy and the authenticity of Internet users’ reactions to the positive and negative events experience by Vivien and Castel can also be explained by the fact that Facebook is a ‘nonymous’ environment (Zhao *et al.* 2008: 1818): the individuals (are supposed to) interact with the other members of the website via their real name, which can obviously have consequences for the nature of the interaction and the performance of identity. For Zhao *et al.*, the nonymous online world emerges as a third type of environment, between totally anonymous websites and nonymous offline worlds. In nonymous online environments,

People may tend to express what has been called the ‘hoped-for possible selves’ (Yurchisim *et al.* 2005). [...] Hoped-for possible selves are socially desirable identities an individual would like to establish and believes that they can be established given the right conditions. [...] They are ‘socially desirable’ or norm-confirming, but that does not necessarily mean that they are not true selves: even though they are not yet fully actualized offline, they can have a real impact on the individuals. (Zhao *et al.* 2008: 1818-1832)

McAndrew and Sun Jeong’s findings, among others, confirm Zhao’s *et al.* hypothesis, as they consider that ‘Facebook usage is heavily driven by a desire for social interaction’ (McAndrew and Sun Jeong 2012: 2360), rather than for impression management, e.g. for impressing other people. As a result, the performance of identities tends to show accurate reflections of their personality rather than idealised selves. However, Facebook’s nonymity is quite specific, as some members prefer using a pseudonym instead of their real name, for privacy reasons, a phenomenon which Facebook is actively trying to prevent. That said, if Facebook offers a virtual space for genuine social interactions, it also provides a perfect social basis for these docufictions which aim to create closeness to their characters. Such closeness can then rely on one’s impression of authenticity and reliability of Facebook members’ profiles and interactions, including Vivien’s, Castel’s and Suzon’s. Following these docufictions becomes, subsequently, a daily social activity like any other we maintain on Facebook; these fictional universes are included in one’s numerous real interactions. The context makes them even more truthful and reliable.

Fourthly and lastly, Facebook organizes specific narrative formats. Van Dijck observes the development of a narrative mode of organising posted information, which corresponds perfectly with the logbook-style tales offered by these docufictions:

The gradual shift from user-centered connectedness to owner-centered connectivity brought along a change in the organisation of Fb’s content from a *database* structure into a *narrative* structure. In the platform’s early years, content was generally organised around user connections, news and friends updates, and active discussions. Database *of* users and *for* users. [...] Over the course of several years, the platform’s owners clearly strove toward more uniformity in data input and began to introduce specific narrative features in the interface – a transformation that culminated into the implementation of Timeline in 2011. The resulting narrative is a construction in hindsight, a retroactive chronological ordering of life events. [...] The narrative presentation gives each member

page the look and feel of a magazine – a slick publication, with you as the protagonist. With the introduction of Timeline, Facebook has crept deeper into the texture of life, its narrative principles imitating proven conventions of storytelling, thus binding users even more tightly to the fabric that keeps it connected. (Van Dijck 2013: 54-55)

Such narrative formatting is perfect for stories such as these docufictions, and enables them to blend even more into the background of one's social interactions.

Online docufictions: textual constraints

Our analysis of the textual constraints aims to analyse how these docufictions mix fiction and non-fiction at four different levels. In his approach to cinema and documentary, Lioult proposes a theory of the relation between fiction and non-fiction, based upon general notions which are not specific to cinema and are applicable also to docufictions. In Lioult's opinion, the distinction between fiction and non-fiction can be found in three¹ pairs of characteristics (2004: 150):

Non-fiction	Fiction
Inclusion of 1st order reality, with objectively recognizable properties	Inclusion of 2nd order reality, made up of representations of 1st order reality
Filmic treatment of this reality	Profilmic treatment of this reality
Indexicality of icons	Emblematic of iconicity

According to Lioult, each pole focuses on the construction of meaning with its own characteristics but *exploits* the characteristics of the other pole. We have mentioned the hypothesis that the barriers between genres are fixed but their creative intentions are mixed. Indeed, in this case, we find characteristics unique to each pole but creative intentions which navigate between the two, using the final purpose of the other pole. Docufictions certainly fall under the heading of fiction, if only due to the fictional nature of the character relating the events. For Jost, the simple fact that a fictional character narrates real events is enough for considering a genre as fictional. In these docufictions, the three characters narrate some real events (e.g. Jean Jaurès' murder, mentioned by Vivien) but their own actions are deprived of precise time and space indications, which could link them to real events that occurred during the wars. By doing so, their creators do not narrate incorrect information about the wars: if nothing is true, nothing can be false.

On the other hand, online docufictions tend to intensify the practice of using non-fiction characteristics. To describe how exactly they do this, we will use the four-level analytical model suggested for cinema by Dominique Château (1986), which was subsequently taken up and applied to television by Muriel Hanot (2002). The four levels it includes are the profilmic, the plastic, the iconic and the diegetic. This model was chosen on account of its potential to analyze multiple aspects of the expression plane, as well as because of its inclusivity: each level deepens the questions raised by the previous ones. In addition, this model allows us to take account of both the actual messages making up the posts and the visual and/or sound documents that often accompany them.

The Profilmic level

The profilmic level can be briefly defined as the scenographic layout of the elements to be photographed, before the actual shooting. This involves determining whether the layout aims to create the *effects of the past* or *of the present* (Hanot 2002: 34-40, our translation).

In an effort to offer Internet users a time-travel experience, the enunciator will exploit the *effect of the past* of 'retroactively dated' (Hanot 2002: 34, our translation) archival images. This process can also be observed in the use of music sound clips, which sound 'old-fashioned' to contemporary ears (Hanot 2002: 38, our translation). In this way, the enunciator highlights the effect of the past characterizing these documents.

In addition to the use of archival material, the enunciator constructs certain pictures. The profilmic aspect (the characters' poses, their appearance, the various background elements of the photo) is in this case reconstructed by convention. With Léon Vivien, as with Louis Castel, we find photographs which personalize objects and integrate them into the fiction, as in the examples presented in Figures 1 and 2.



Figure 1: Photograph accompanying Louis Castel's post on December 31, 1943: 'New Year's Eve. "Seconds, come and get it!". Tonight, we will be allowed double rations and a "special dessert": cookies!'© Mémorial de Caen



Figure 2: Photograph accompanying Léon Vivien's post on November 9, 1914: 'Get dressed, team! I'm going back to my room to prepare my bag for a military march which will take place tomorrow morning.'(Our translation)© DDB Paris

While the photographs created today recall the photographic practices of the time, the photos of small objects in Vivien's and Castel's hand and photographed with the other hand, as well as some of Vivien's self-portraits, recall the contemporary practice of 'selfies' taken with Smartphones rather than the customary practices at the beginning or the middle of the twentieth century. The slightly quirky nature of these photographs means that a certain knowledge of the photographic art is required for it to be identified; this is not an issue for non-expert Internet users, who do not notice the anachronism.

In the absence of appropriate archival material, the Caen Mémorial has sometimes taken the decision to resort to drawings for characters' Facebook profiles and for various illustrations accompanying their posts (see Figures 3 & 4). While reproducing the profilmic aspect of the time, they cannot possibly be equated with authentic documents and do not really contribute to the creation of a reality-effect.

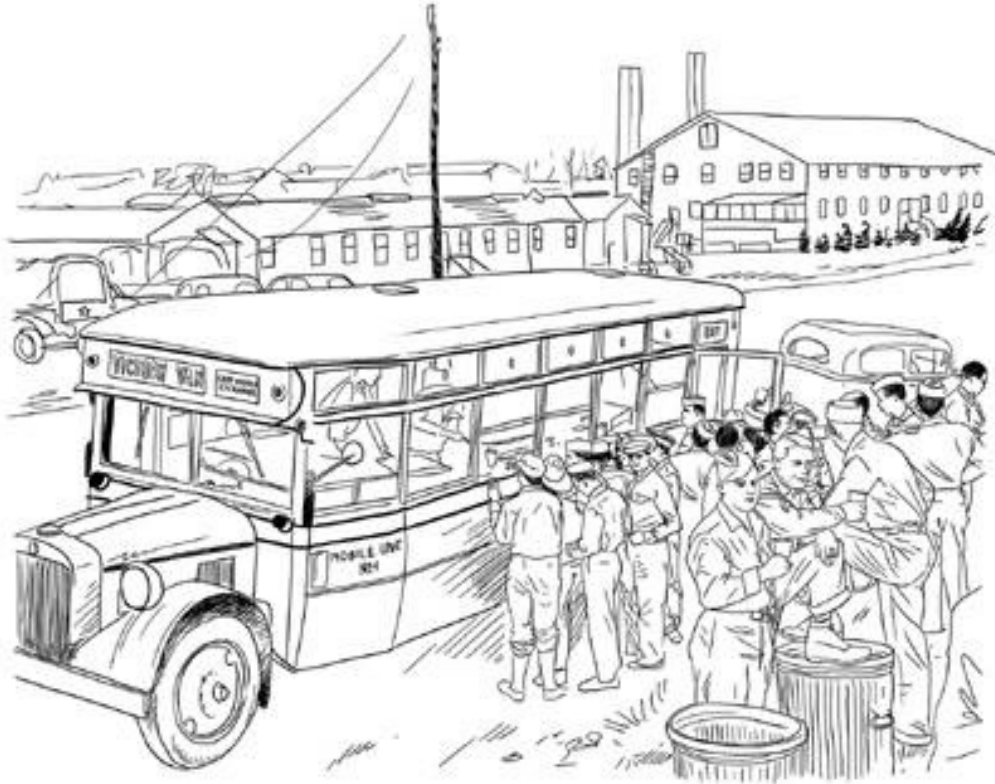


Figure 3: Drawing accompanying Louis Castel's post on December 9, 1943: 'Another few days at the Kilmer camp. Milk, always milk! Personally I would prefer a good côtes-du-Rhône, a vintage Burgundy or some Bordeaux!'© Mémorial de Caen



Figure 4: Illustration accompanying Suzon's post on October 2, 1940: 'Dear diary, it's the beginning of a new school term! [...] When I come back from school with a muddy blouse, aunty grumbles at me because I'm dirty. Well, I'll leave you because I've got a load of homework for tomorrow and afterwards I've still got my chores on the farm! No quiet life for me...'(Our translation)© Mémorial de Caen

As opposed to authentic archival material, these documents of questionable credibility tend to reinforce the fictional nature of the tale. Although such drawings are rather rare in Louis Castel's story, they are quite systematically used to illustrate Little Suzon's story. All drawn by the contemporary French designer Alice Dufay, these drawings correspond more to children's visual habits than 'old' pictures. Such plastic choice is thus likely to attract children familiar with books and cartoons. Let us now see how the plastic level conditions our hybrid approach to these docufictions.

The Plastic level

Our focus here is on 'indexes of materiality' (Hanot 2002: 46, our translation), which correspond to indexical *traces* left by the passing of time: black and white marks, yellowing and/or deterioration of photographs, sound static, etc. The developers of Léon Vivien decided to age all the photographs by using the same black and white patina. The various origins of the documents are also hidden, so as to favour a coherent global narrative; the plastic homogeneity gives the impression that all of the photographs have been taken in the same time period, with the same device. The care taken with the plastic dimension demonstrates that the enunciator favours the *transparency* rather than the *unveiling* of the medium, in an attempt to support the aesthetic aspect of the tale. The purported spontaneity of Facebook posts does not show itself through (falsely) naturally brute plasticity. The combination of a *profilmic past effect* and a *past effect of materiality* creates an 'effect of historicization' (Hanot 2002: 52, our translation) unique to archival documents and reconstructions. The profilmic and plastic modification of the original documents is hardly visible upon a quick reading; the Internet user is placed in a 'quasi-perceptive' position (Schaeffer quoted in Jost 2004: 33, our translation) which invites him to take in the image without examining the details. Facebook's general momentum in itself, moreover, whereby posts rapidly follow each other, reinforces this quick, global reading.

The developers of Louis Castel and Suzon, on the other hand, have chosen to preserve the original, plastic characteristics of the photographs. The latter originate from various archival collections and some are available in online databases. The sought-after 'pastness' effect of materiality is thus undeniably authentic. This choice, however, entails certain differences in the black and white patina and a degree of grain variation between some of the photographs used. As is the case of the drawings, narrative coherence is once again rather perilous. While photographs are sometimes harmonised, other types of visual documents used (newspaper extracts, military documents, etc.) maintain their own particular indexes of past materiality, contributing, thus, significantly to the effect of historicization sought by the enunciator.

The Iconic level

On the iconic level, we investigate the extent to which the reality put forward constitutes a reality which flaunts itself or a reality which erases its reference marks. In other words, are we faced with a *true* or a *realistic* presentation of events? In these Facebook docufictions, the original self of the enunciation is not real but a fictional character. Against this background, the relationship with events cannot be real but only *realistic*. These docufictions offer us, in Barthes' sense (1957), a somewhat *mythical* way of handling real world conflicts: Vivien's experience unfolds in an undetermined space and time; dates and places are not given. Lioult (2004: 150) provides an apt summary of the iconic issue when he states that cinema most often assumes the function of a parable or allegory, while documentaries demand that space and time, characters, etc. represent *themselves*. This is confirmed in docufictions on the Internet: events captured in photographs are inserted into the story but they mainly act as *archetypes* of the war they narrate, beyond their *hic et nunc* origin and beyond the created fiction. For example, Vivien narrates his departure to the frontline and writes that they arrived in a 'large village in the countryside' after a night long train journey, but he never gives the village's name. Such a technique is also

used in relation to his stay at the barracks, during which he shows numerous pictures but he never links them to a specific location. In a similar way, Castel informs us about his stay in the Military Police, without giving any spatial indication.

The various photographs used in Louis Castel's tale act to de-contextualize the profilmic elements, erasing thus any specific historical reference, and to re-contextualize them in a fictional universe. For example, actors and actresses watching a softball match in New York (Paul Robeson and José Ferrer) become 'Jack' and 'Jacqueline' in the story, who have come to support Castel at a baseball match.



Figure 5: Photograph accompanying Louis Castel's post on December 20, 1943: 'We were not the Yankees but what a game! To support me, even playing baseball, there is no one better than Jack and Jacqueline.'© Everett Collection Historical/Alamy

Inserting real and well-known events in the story strengthens such a mythical approach to war. For example, several of Vivien's posts are devoted to the famous Paris taxis' requisition by the French army to transport troops to the first battle of Marne. Subsequently revealed to have had very little actual impact, the Paris' taxis requisition event belongs clearly to the popular mythology of the Great War. Castel for his part reminds Winston Churchill's famous words 'I have nothing to offer but blood, toil, tears and sweat'. As we see, events described in detail but without specific spatial indication are combined with real war myths to create these docufictions.

The complexity of analysing the characters' posts is especially due to the fact that they collectively include the effects of 'fictionality' and realism: on the one hand, the internal focalization of Vivien, Castel and Suzon's tales brings out their fictional dimension, to the extent that the war reaches us via the eyes of a fictional character. On the other hand, the posts exploit the indexical strength of these archival photographs. The Internet user is faced with 'indexical icons' (Schaeffer quoted in Lioult 2004: 64, our translation) which maintain an impression of pastness, but which are also coded according to current photographic practices and especially, on the basis of contemporary symbolic representations of war. The tension between iconic, indexical and symbolic

functions encourages the multifaceted interpretation of the photographs. Vivien's enunciator stresses the indexical nature of these photographs – they consist of real footprints preserved by an authoritative institution like the museum – but erases their specificity in order to present them in a symbolic manner: they become war symbols deprived of any concrete indexicality. In contrast, the Caen Mémorial has kept visible references and copyrights on most of the photographs, and has also preserved the explanations accompanying them. These references have been deleted in Vivien's case, once again in order to homogenise the tale and to give the impression that the pictures originate from the same era and camera. Thus, fiction uses the contextualization of archival images to different degrees, in order to create an effect of realism and authenticity.

The Diegetic level

On the diegetic level, the questions raised by the profilmic, plastic and iconic levels are intensified, in order to investigate the way in which a tale is set up (or not): is the editing transparent, continuous and supportive of the tale? Or, on the contrary, is it unveiled and discontinuous, supportive of an indexical approach to the events? There is no doubt that in the case of docufictions, narrative logic wins hands-down. For example, we have shown how Léon Vivien's Facebook page shows analogies with Hollywoodian codes (Bouko 2014). It is noteworthy that the construction of this story, which aims at a dramatic climax, is based on Aristotle's three acts theory, widely recommended by professional Hollywood script consultants (see e.g. Seger 1992). In Léon's case, the three-act division ensures the necessary narrative balance: the first act lasts three months and a half; it serves to introduce the context and then the beginnings of the conflict from an external point of view, as Vivien has not been called up yet. The second act is the longest (five months and a half) as it primarily serves to recall the everyday life in the training camps and in the reserves, while the third act is the shortest one (one month and a half) and the most dramatically intense: Vivien bears witness to the horror of the battlefield by evoking many particularly violent events in great detail.

We have already mentioned the device's transparency in the homogenization of the photographs in the Léon Vivien case. On the diegetic level, Vivien and Castel's comments contribute to the construction of the narrative world by placing images in fictional space and time, without taking account of their indexical nature.

While immediate narration gives the impression of current, ongoing reality – the characters narrate their story at the very moment that things take place – and thus fosters the idea of a direct access to reality, the deictic signs themselves constitute 'indexes of fictionality' (Schaeffer quoted in Jost 2004: 57, our translation): in a story about the First or Second World Wars, indicators such as 'now', 'tonight' or 'tomorrow' can only refer to a fictional original enunciator which himself refers to a past narrative. Moreover, the unique mechanism of social networks superimposes itself here: the characters' messages resemble posts published by our friends and lend themselves to an 'authenticating' interpretation. Various procedures and effects, with contradictory aims, are at work, encouraging interpretation on a number of different levels.

Conclusion

The intense emotions expressed by Léon Vivien's followers aroused our curiosity: how can such fictional characters captivate so many Facebook members, who read their experiences of WWI or WWII day after day? More generally, how can history become dynamic thanks to social media? To answer these two questions, we adopted a semiopragmatic approach to analyze the docufictions presented on Facebook in 2013, 2014 and 2015, which were created around three fictional characters: Léon Vivien, Louis Castel and Little Suzon. A guiding idea in our analysis has been Buckland's argument that 'one dramatic way to define the pragmatic theory of meaning is to say that it is premised on *non*-communication – in which *failure* to communicate is the norm, and what needs to be explained is how successful communication takes place' (Buckland 2000: 80-81). Indeed, instead of

studying these docufictions from the point of view of their supposed transparency, we decided to analyse the *constraints* that condition their followers' reception and meaning construction. Two types of constraints were analysed: *contextual constraints*, in the context of which the implementation of Jost's concept of a *promise* revealed the ambiguity of the discourses linking these docufictions to the real and the fictional worlds. Facebook's interactional characteristics can also be seen as contextual constraints that condition how to share and like content, how to perform one's identity in such a 'nonymous' social space, as well as how to narrate, as each Facebook page is now chronologically structured, closely resembling personal life stories.

Subsequently we examined the *textual constraints* on four different levels: profilmic, plastic, iconic and diegetic. In addition to archival material, Vivien's and Castel's docufictions also have recourse to purpose-made pictures or drawings. These additional materials reproduced the archive's profilmic features, and sometimes mixed them with contemporary photographic practices. The humanization of the war was achieved thanks to numerous pictures which illustrated the details of the soldiers' daily experience, notably outside of military operations, or picked up personal anecdotes or precious and moving moments. On the plastic level, we saw how these pictures had been homogenised in Vivien's case, erasing any plastic indexical trace in favor of coherent visual storytelling. On the contrary, Castel's docufiction left plastic traces of each picture, which showed their various origins. On the iconic level, we observed how Vivien's and Castel's docufictions constructed a mythic approach to war, mixing detailed events without any spatial indication with famous and mythic events which occurred during the two world wars. On the diegetic level, we observed how narrative strategies were used to create these docufictions. This four-part analysis makes it possible to conclude that *fiction exploits the characteristics of non-fiction*, in line with Lioult's hypothesis.

Through a careful blend of historical fact and fiction, the Vivien, Castel and Suzon tales prioritised emotion and united fans in an *empathic experience* of the war. In doing so, the creators of this experience on Facebook pay homage to the soldiers' subjectivity. To some extent, they seem to follow the principles of New History: 'creating an empathy with the past is surely at least as, if not more important, than any flawed attempt to resurrect the past under the belief that it comes back to us as it really was' (Munslow 2003: 147).

NOTES

1. He adds the pairing of analog and digital meaning, which we do not consider here.

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Discursive practices in Wikipedia politeness discourse

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This paper discusses discursive practices in multilingual Wikipedia pages such as Civility, Etiquette, Consensus, No Personal Attacks, and Dispute Resolution. These pages explain to contributors the rules of collaborative behavior in a Wiki-community. The paper attempts to answer a question raised by Lovink and Tkacz (2011): 'How do different language communities relate to and differ from one another in multilingual projects?' A discursive approach is adopted in order to analyze politeness strategies on the multilingual Wikipedia pages. The discursive politeness practices recommended in the English, French, and Russian Wikipedia pages are analyzed through the concept of Face Threatening Act (FTA). In view of the criticism directed at the traditional FTA concept, we redefine FTA as a unit of discursive strategies. Our findings point out the divergence in applying politeness strategies to English, French, and Russian pages. Two hypotheses are advanced to explain their divergence. The first concerns the role of cultural variation, while the second concerns the role of ideological transformations in the process of knowledge production on Wikipedia.

KEYWORDS Wikipedia; discursive practices; Face Threatening Act (FTA); positive/negative politeness strategies

Introduction

Media technologies in the age of globalization have given rise to new forms of knowledge organization. Wikipedia, the XXI century universal encyclopedia, was one of the ten most popular websites in 2007.¹ According to estimates by the Wikipedia community, the most active contributors, across the more than the 250 languages, are in the hundreds of thousands.²

In the Internet age Wikipedia seems to expand the encyclopedic ideal of Diderot and D'Alembert, which was so radically innovative for the XVIII century. In contrast to earlier encyclopedias, which had only one author, their Encyclopedia was the first to use the collective work of various contributors to gather 'all the knowledge' in the world. Involving nearly 200 authors, this collective undertaking was marked by bitter controversies. These were largely due to the polemic character of the Encyclopedia, which was not simply a reference book, but a singular political and cultural intervention, about which Encyclopaedists had divided opinions. They worked for a common project, but their different ideological orientations and intentions fostered more controversies than efficient collaboration.

Despite the historical debt of the Wikipedia project to the French Encyclopedia, the online forms of communication emphasize consensus, a neutral point of view, and an impartial tone. These requirements result from a new conception of free knowledge. In a brief historical overview of Encyclopedias, O'Sullivan (2011: 47) explains that, the fact that the wiki software allows anyone to contribute, makes Wikipedia unique, even among other Internet encyclopedias. Unlike previous Internet encyclopedias, Wikipedia is free not only to use but also to edit. O'Sullivan notes the emergence of a new concept of knowledge, which is flexible, fallible, refutable, and involves change, disagreement, and continuous partial revision. He argues that Wikipedia's numerous rules and

conventions is a result of the great variety of opinion. When Wikipedia was created the main task was the completion of the project, so anyone was allowed to contribute. Nevertheless, as Graham (2011: 279) argues: 'there can only be one representation of any given feature or event present at any one time on its site. The countless ways of interpreting economic, social and political landscapes mean that articles that contribute [...] necessarily must only represent selective aspects [...] in selective ways.' According to Graham, this selectiveness is a result of 'power relationships and divisions in the offline world'. Thus, Wikipedia discourse reproduces power relation proper with the discourses of different specific domains of knowledge.

Politeness discourse in Wikipedia

The continual revision of Wikipedia's multilingual information, as well as its distinctive collaborative character (Reagle 2010) evokes Foucault's description of the discursive construction of knowledge (Foucault 1972). Although he does not explicitly refer to semiotics, Foucault introduces a concept of discursive practices, which can be considered as a particular semiotic system grounded in a social and cultural context. A discursive practice is a way of creating meanings peculiar to this context. The concept of discursive practice has subsequently been developed by Critical Discourse Analysis that considers discursive practices as constituted by anonymous rules, systems and procedures in which knowledge is produced (Jorgensen and Phillips 2002: 62). They are structured through forms of selection, exclusion or domination, that concern both power relations and linguistic choices. Although produced by individuals, they are stable in the given social context due to the social and ideological position of individuals. Their position implies a system of constraints that make an arbitrary form of enunciation impossible, whilst emphasizing its particular forms.

A discourse analysis approach concerns not only referential semantic content, but also the social, ideological, and transformative power of discourse. The use of language in different social contexts is based on the indexical component of the language, because every utterance is grounded in the socially constituted relationships of individuals in any given interactional context. In his study on the indexicality of the linguistic sign, Gurdin (1994: 60) argues that within social and cultural communities, individuals index themselves against others 'in creative ways, manipulating and transforming categories and their social identities'. Thus, the use of particular linguistic forms coincides with the ideologies that shape these social categories. Social and cultural context orders particular linguistic choices and prescribes the use of particular discursive practices. If any linguistic form indexes a context in which it was used, some linguistic choices are more ideologically marked than others.

Discursive practices are considered here in the narrow sense, because they only concern the politeness strategies preferred by different Wikipedia language communities. Discursive politeness strategies are analyzed across multilingual Wikipedia pages, which explain to new contributors the rules for creation or improvement of pages. The highly democratic character of the Wikipedia project, where anyone can contribute, has necessitated the explicit governance of new contributions, in order to avoid conflicts in the Wikipedia community and to structure online free knowledge (O'Neil 2011). O'Neil notes that 'the crucial fact about Wikipedia's rules is indeed that there are more and more of them and that 'non-encyclopedic work, such as discussion, procedure, user coordination, and maintenance activity, such as reverts and vandalism, is on the rise' (O'Neil 2011: 317). In fact, a lot of special pages explain the politeness strategies for countless Wikipedia contributors: *Fundamental Principles*, *Five Pillars*, *Civility*, *Etiquette*, *Consensus*, *No personal attacks*, and *Dispute Resolution*. Most of these pages are created in multilingual versions. All these pages are representative of Wikipedia politeness discourse as they satisfy all four of Foucault's criteria: its 'statements refer to the same object, are made in the same enunciative modality, share a system of conceptual organization and share similar themes and theories, which Foucault calls strategies' (Sawyer 2012: 436).

Linguistic politeness theory: traditional approach

Reviewing approaches to analyzing politeness, Fraser (1990) identifies four basic approaches. Arguing that the social-norm view is more historical than that actually adopted by the researchers, he analyses the remaining three.

The conversational-maxim view implies Lakoff's and Leech's politeness maxims. In fact, Lakoff has reformulated Grice's notion of Cooperative Principle on the basis of pragmatic rules, but her threefold classification of politeness – polite, non-polite and rude – makes real discourse analysis inefficient, since the perception of polite or impolite action is a function of situational assessment. Therefore, Fraser argues that it is problematic for the speaker or listener to assess what level of politeness is required in interaction, whether formal, informal or impersonal. Leech defines 'absolute politeness' through five functions involving different communicative acts (Trosborg 1994). The collaborative function would correspond better to the Wikipedia community discourse, because of the collaborative character of knowledge production on Wikipedia. But for Leech, the collaborative function relates only to acts whose illocutionary goal is indifferent to social goal, e.g. assertion, reporting, announcing, and instructing. Politeness cannot be all that relevant to these acts; Leech defines them as neutral towards politeness.

The next approach examined by Fraser is Brown and Levinson's face-saving model. Brown and Levinson (1987) developed a linguistic politeness theory for intra-cultural communication, widely known as the B-L model, based on Goffman's notion of face. Either the speaker or the addressee possesses two faces, negative (NF) and positive (PF). The needs of the NF are privacy, personal space and the right not to be embarrassed. The needs of the PF are to be approved of by others. Communication is considered as a chain of face threatening acts (FTAs), that is, speech acts which threaten the PF or NF of either the speaker or the addressee. The B-L model envisages four types of discursive strategies: Bald on-record strategies are not at all polite, as they don't mitigate the addressee's face at all. Positive politeness strategies attempt to minimize the harm to the addressee's PF and prove that the speaker has the same intentions as the addressee. Negative politeness strategies manage the addressee's NF by avoiding risk to his autonomy. Off-record strategies, finally, are also called indirect strategies because of the evasive language that the speaker employs to obscure his real communication intention, so that FTA is not committed. Through communication, the speaker should manifest facework, in order to manage NF and PF of the listener, but at the same time remembering to manage his own faces.

The B-L model has been criticized for its individualistic and ethnocentric notion of face (Bargiela-Chiappini 2003; Trosborg 1994), whereas Goffman's theory of ritual interaction has introduced a socially and culturally dependent concept of face (Goffman 1972: 31). The B-L model stresses one's individual personality, which is considered a sacred thing (Brown and Levinson 1987: 11). The more significant criticism to the B-L model regards its rationalist conceptualizing of the speaker and the addressee as model persons who are able 'to choose the appropriate way in which s/he should use the Gricean maxims in the effort to maintain the mutual maintenance of face for both her/himself and the addressee in the most efficient way' (Watts et al. 2005). Although Fraser (1990) notes that the B-L model is systematically challenged, nevertheless he underlines that it represents the more fully articulated version.

Wilson's criticism of the B-L model's assumption that 'all FTAs can be analyzed by looking at decontextualized speech acts' (Wilson et al. 1992: 218) forms the basis of the fourth approach examined by Fraser (1990: 232): the conversational-contact view. The conversational interaction in this approach is considered as a 'set of rights and obligations that will determine [...] what the participants can expect from the other(s)'. According to this view, politeness is not a result of the participants' concern for face-loss, but of their negotiations through the interaction. A similar approach to analyzing rights and duties is suggested by Moghaddam and Triandis (Bargiela-Chiappini 2003). Taking into account the individualism-collectivism dimension of cultural variation, they distinguish rights-based and group-based societies where politeness concerns could be explained by 'weighting' the rights of positive and negative valence, duties towards the group

and duties to self. Interdependence between rights and duties implies self-other relationships, which allow different interpretation of polite behavior (Bhatia 2000: 306).

To overcome the ethnocentric aspect of the B-L model, Ting-Toomey (1988) has suggested Face-Negotiation Theory (F-N theory), an interactional approach for intercultural communication. F-N theory analyses facework strategies applied by people of different cultures. In order to identify specific cultures, she chooses two dimensions: Hofstede's individualistic-collectivistic dimension and Hall's low-high context dimension (Hall 1997). Individualistic cultures prefer solution-oriented styles in communication, whereas in collectivistic cultures one chooses affective-orientated styles. On the individualism scale, for instance, Russia scores 39, France 71, the USA 91, the UK 89, and Canada 80.³ In low-high context cultures we find opposing attitudes towards verbal explicitness-implicitness of interactions. Low-context cultures don't appreciate verbal implicitness (e.g. US, UK), while verbal interactions in high-context cultures are implicit (e.g. Russia, France). Ting-Toomey assumes that individualism is correlated with low-context communication while collectivism is correlated with high-context communication. Her analysis suggests that individualistic, low-context cultures choose rather direct modes of communication, emphasizing *I*-identity and competitive strategies that primarily preserve the NF. Whereas collectivist, high-context cultures affect indirect communication mode with emphasis on *WE*-identity, people identify with their in-group (Earley 1997: 137). They prefer other-face and collaborative strategies that preserve primarily PF.

Linguistic politeness theory: the postmodernist approach

In the absence of a clear definition of politeness, researchers (Watts et al. 2005: 3) still need to distinguish between first-order and second-order politeness. First-order politeness corresponds to various ways in which polite behavior is perceived and talked about by the members of socio-cultural groups. Second-order politeness, on the other hand, is 'a theoretical construct, a term within a theory of social behavior and language usage'.

A postmodernist view of polite behavior has arisen from the postmodernist theory of language. Watts (2005a: xli) notes that the postmodernist conceptualization of politeness suggests that perceptions of what is polite or impolite 'vary considerably from speaker to speaker, from community of practice to community of practice and even from one situational context to another in the case of individual speakers'. Thus, politeness is perceived as a dynamic concept. Ehlich (2005: 79) points out that perceptions of politeness are always open to adaptation and change in any group, at any age and at any moment of time that arises through interaction. The postmodernist interpretation of polite behavior has proved quite fruitful, by allowing for different theoretical frameworks for analyzing socially constructed appropriateness in verbal interactions.

Watts (2005b: 51) has proposed to distinguish polite and politic behavior by supposing a broader variety of forms of behavior perceived 'to be more than socially required'. Janney and Arndt (2005) make a distinction between social politeness based on Goffman's theory of ritual interactions and tact understood as an interpersonally supportive way of behavior. Werkhofer (2005) proposes a new understanding of politeness, which is based on calculating the rights and duties of participants and considering the appropriateness of their behavior regarding their position in actual interactions. Watts (2005b: 55) argues that all frameworks suggested by the postmodernist approach to politeness can be considered as attempts to reach out beyond the confines of the B-L model. According to Hough (2007) their theoretical contributions for developing the theory of politeness have given rise to new challenges such as the place of the analyst vis-à-vis the participant in interpreting interactional context. In a detailed review of discursive perspectives to politeness, Hough (2007: 313) points out that in 'attempts to construct an alternative theory of im/politeness, it is important to consider the question of where politeness should be located within such a broader theoretical framework'. But none of the postmodernist or discursive approaches to polite behavior suggests such fully articulated and practically useful

procedures as the B-L model, able to analyze the linguistic choices of interaction's participants for applying politeness strategies.

In the lack of a more appropriate model for describing discursive politeness strategies, it can be argued that Brown and Levinson's FTA concept could be used to study discursive forms because it indexes im/polite behavior in a given context. There are a lot of criticisms about the FTA concept, but, to date, it is certainly the most convenient for empirical research. An additional argument for using FTA analysis is the fact that the notion of face and face-threat mitigation, being theoretically redefined, is widely applied in different postmodernist approaches (e.g. by Watts, Sell, Werkhofer). The FTA concept is used in this line of research as a unit of discursive strategies in a broader perspective than it was in the B-L model. FTA's interpretation in a given interactional context takes into consideration Hough's observation of 'variability in the evaluations of behavior' (Hough 2007: 313) resulting from the interactional negotiations of the participants. Moreover, if the FTA concept is challenged in the theoretical framework of politeness, Watts (2005a: xix) points out 'a shift of emphasis away from the attempt to construct the model of politeness which can be used to predict when the polite behavior can be expected or to explain post factum why it has been produced'. Thus, to date, the FTA concept appears to be the most appropriate in empirical research which aims to explain how politeness strategies develop in interactions.

Our discursive approach is based on the typology of politeness strategies suggested by Kerbrat-Orecchioni (1998) as an improvement of the B-L model. She has redefined negative politeness; off-record strategies having been reexamined according to their pragmatic goals through positive and negative politeness. New typology for positive and negative politeness allows overcoming one more criticism addressed to the B-L model in which negative and positive politeness are considered as mutually exclusive and only one type of face can be threatened at any given time. Positive politeness supposes enhancing the other's positive value by addressing especially strengthened Face Flattering Acts concerning both the positive and negative face to addressee. Negative politeness consists of avoiding, reducing, or softening FTAs to both faces. For Kerbrat-Orecchioni negative politeness can be implemented in two ways, by substitution and supplementary strategies. Realizing their linguistic choices, the interlocutors take part in face-working negotiations. Such FTAs as request or order are usually formulated with the imperative mood and perceived as the most threatening act, i.e. bald on-record strategies in the B-L model. Using substitution strategies can mitigate the threat, which substitute the imperative mood with speech acts perceived as less damaging, e.g. modal or impersonal constructions. Supplementary strategies attempt to mitigate the FTA while an explicitly threatening statement is supplied with additional linguistic forms anticipating the future FTA before committing or repairing the FTA already committed. One can explicitly announce the future FTA before committing it, strengthen apologies for the FTA before or after committing it, or give a supplementary compliment to repair the damage for the committed FTA or advance arguments to justify committed FTA. Certainly a very exhaustive list of linguistic forms implied in positive and negative strategies is suggested by Kerbrat-Orecchioni only for the French; however, variable techniques of minimization in FTAs appear to be similar to different socio-cultural communities. The following analysis of politeness strategies in English, French, and Russian Wikipedia proves that many of them are equally used in Russian and English communication.

The discursive approach is articulated through the flexible interpretation of statement viewing as a speech act which variable meaning always depends on the position of interpreter. Thus no single speech act can be intrinsically threatening like it was in the B-L model. Beyond interactional context, it is impossible to perceive the speech act as threatening to anyone's face; only the situational analyses allows understanding the pragmatic sense of statements in a given context and their mutual interpretations.

On the other hand, the discursive approach is articulated through empirical material chosen for the research. Wikipedia pages explaining politeness strategies for new contributors deal with first-order and second-order politeness. To the extent that these pages explicitly define the rules for interaction between the members of the Wikipedia community, they refer to first-order politeness. Nevertheless, problematic politeness arises in

these pages as a theoretical framework by those responsible for Wikipedia content governance, so their reflections appear to be linked to second-order politeness. Finally, speculating on politeness in Wikipedia, the anonymous authors of Wikipedia pages adopt – this time implicitly – different linguistic forms which index discursive politeness strategies differently for different language communities. In agreement to Foucault's discourse analysis approach (Jorgensen and Phillips 2002: 13), however, it will be demonstrated that, despite the different languages involved and the resultant 'infinite number of ways to formulate statements... the statements produced within [this] specific domain of knowledge are rather similar and repetitive', reflecting the fact that the governing principles of Wikipedia (Lovink and Tkacz 2011: 12) result from 'the global politics of knowledge production' common to all contributors.

Discursive politeness strategies in Wikipedia pages

Linguistic forms used by Wikipedians in different languages relate to specific social and cultural choices. They reflect, primarily, the dominant form of politeness discourse in their particular linguistic context. In applying a discursive approach to Wikipedia pages, we must begin by asking which linguistic forms are considered dominant in different Wikipedia language communities. In analyzing discursive politeness practices we intend to compare statistical data regarding the use of politeness strategies. In the case of negative strategies, we count substitution and supplementary strategies separately. From the B-L politeness model, specifically, we have adopted the notion of bald on-record strategies, i.e. speech acts perceived in the given context as threatening and committed without any damage repair.

Five Pillars

Five pillars/Principes fondateurs/Пять столпов is the Wikipedia page with the same multilingual content summarizing basic Wikipedia norms and rules for newcomers. In order to avoid unnecessary wording some request forms are directly formulated as FTAs, but for all languages different politeness strategies are mostly applied to mitigate imposition of norms and rules governing Wikipedia content production.

For the first pillar, English, French, and Russian have chosen the same substitution strategy. The statements explaining to newcomers how Wikipedia differs from other information sources, such as dictionaries or newspapers, use negative forms of indicative mood (1) rather than the imperative mood, which, in this context, could be perceived as explicit FTA. Affirmative statement in this context is not considered as applying any strategy (1*) since it only supposes describing the starting position:

- (1) *It [Wikipedia] is not a dictionary, a newspaper/ Wikipedia n'est pas un journal, un hébergeur gratuit/ Это [Википедия] не газета и не сборник исходных документов.*
- (1*) *Wikipedia is an encyclopedia: it combines many features of general and specialized encyclopedias, almanacs, and gazetteers.*

To prevent newcomers from taking wrong steps, the statements using negative forms of indicative mood (2) define the prohibited actions on Wikipedia, instead of prohibiting them:

- (2) *Wikipedia is not an advertising platform/ Ce n'est pas l'endroit où faire part de vos opinions/ [Википедия] не беспорядочная свалка информации, не каталог ссылок.*

In the French version, a substitution strategy is applied through the modal construction to express obligation imposed on the contributors (3):

- (3) *Tous nos rédacteurs se doivent de respecter l'interdiction sur les recherches originales (dits aussi «travaux inédits») et de rechercher une exactitude aussi poussée que possible.*

The English version briefly enumerates what Wikipedia is not, while the French and the Russian versions are much more verbalized, due to supplementary statements designed to prevent newcomers from taking wrong steps. In English, the argumentation is only used once (4):

- (4) *It [Wikipedia] is not [...] a collection of source documents, **although some of its fellow Wikimedia projects are.***

The supplementary arguments on the French page are mostly given through the participle construction (3, 5):

- (5) *Wikipédia n'est pas une compilation d'informations ajoutées sans discernement.*

On the Russian page, the supplementary arguments are given in an assertive statement through modal (6,7) and impersonal (8) constructions and embedded clauses (7,8). There are statements which apply two strategies at once, e. g. (7): the modal contraction realizes the substitution strategy and the embedded clause the supplementary one.

- (6) *При работе над каждой энциклопедической статьей **следует стремиться** к максимальной точности и проверяемости.*
- (7) *[...] сведения, вызывающие сомнения и не подтверждаемые ссылками, **могут быть удалены, поэтому не забывайте** указывать источники вашей информации.*
- (8) *Оригинальные идеи, толкования, результаты самостоятельно проведённых исследований **невозможно проверить, а потому они здесь неуместны.***

For the second pillar, the English version differs from the French and Russian ones by the stressed use of the pronoun *we* (9), which emphasizes the collaborative character of Wikipedia community:

- (9) *We avoid advocacy and **we** characterize information and issues **rather than** debate them.*

However, the *we* of community solidarity could be perceived by newcomers as a will to underline the distance between themselves and experienced contributors. A modal construction with *must* stressed by an adjective, *all* (10) is also considered as a sign of imposition:

- (10) *All articles **must** strive for verifiable accuracy [...].*

In the French and Russian versions modal (12, 14) and impersonal (11, 13, 15) indicative constructions are preferred to mitigate impositions for newcomers which are implicitly addressed in the statements. Only one English statement uses the same implicit strategy instead of prohibiting the contributors to refer to their own personal experiences, interpretations, or opinions (11):

- (11) *Editors' personal experiences, interpretations, or opinions **do not belong.***
- (12) *[...] les articles **ne doivent pas** promouvoir de point de vue particulier.*
- (13) *Parfois, cela **suppose de décrire** plusieurs points de vue.*
- (14) ***Не следует** представлять то или иное суждение как «единственно верное» или как «истину в последней инстанции».*
- (15) *Соблюдение НТЗ также **означает необходимость** предоставления ссылок на проверяемые авторитетные источники [...].*

Twice, the English version substitutes prohibition with a comparative, e.g. of personal point of view (9, 16):

- (16) *[...] we describe multiple points of view, presenting each accurately and in context **rather than** as 'the truth' or 'the best view'.*

For the third pillar, the English and Russian versions use the bald on-record strategies (17, 18), which are avoided in the French version that employs only modal and impersonal constructions (19):

- (17) *Respect copyright laws, and never plagiarize from sources.*
- (18) *Не размещайте в Википедии материалы, нарушающие авторское право [...].*
- (19) *Les obligations sont [...] de créditer les auteurs originaux.*

To stress the contributors' rights over their articles, all three versions use supplementary modal lexical means, such as *anyone can/all editors/no editor/any contributions can*, e.g. in (20, 21, 22). Thus, in the given context, the use of lexical means that increase the rights of contributors articulates positive strategies:

- (20) *Wikipedia is free content that anyone can use, edit, and distribute.*
- (21) *Cette licence autorise chacun à créer, copier, modifier et distribuer le contenu de Wikipédia.*
- (22) *Следует иметь в виду, что статьи могут редактироваться кем угодно [...].*

The fourth pillar deals with civility rules and it uses the most bald on-record strategies in the imperative mood (23) which evidently results from a strong imposition of formal Wikipedia rules and norms that are briefly enumerated in all three versions. Some the imperative mood statements are not perceived as bald on-record strategies, since they are supplied with arguments commonly expressed in the embedded clauses (24). On the French and Russian pages, some of the imperative mood statements are substituted with modal constrictions (25). In (25) the imperative mood of the modal verb *efforcez* is not perceived as a bald on-record strategy, but it uses the substitution strategy:

- (23) *Apply Wikipedia etiquette, and don't engage in personal attacks.*
- (24) *If a conflict arises, discuss it calmly on the nearest talk pages [...].*
- (25) *Efforcez-vous d'être ouvert, accueillant et amical.*

The imperative mood in (26, 27) is not perceived as a FTA; by contrast, this statement can be considered as applying a positive strategy. Encouraging newcomers to contribute through use of a imperative construction gives an argument for participation:

- (26) *[...] remember that there are 4,686,547 articles on the English Wikipedia to work on and discuss.*
- (27) *Ne perdez pas de vue qu' il y a 1.577.876 articles différents sur la Wikipédia francophone, sur lesquels vous pouvez travailler et discuter.*

In the fifth pillar, all versions use positive strategies to encourage newcomers to contribute and to not be afraid of making mistakes (28, 29). In these statements the imperative mood is not perceived as a FTA, but as a positive strategy, because of its meaning in the given context:

- (28) *N' hésitez pas à être audacieux dans vos contributions*
- (29) *Смело правьте, переименовывайте, изменяйте статьи — в этом заключается удовольствие от редактирования [...].*

The statistical data presented below (Table1) point out the politeness strategies occurrences on the pages *Five pillars/ Principes fondateurs/ Пять столпов*.

language	politeness strategies	Negative politeness strategies		Bald on-record strategies	Positive politeness strategies
		substitution strategies	supplementary strategies		
English (<i>Five pillars</i>)		15	14	13	2
French (<i>Principes fondateurs</i>)		15	13	6	3
Russian (<i>Пять столпов</i>)		15	13	8	3

Table 1. Politeness strategies in the Five Pillars page

Positive politeness strategies are applied in three languages only to encourage collaborative practices from newcomers. Negative politeness strategies are much more frequent, since they allow the mitigation of Wikipedia community impositions for the newcomers. For all languages, negative strategies are realized by substituting the imperative mood with modal and impersonal constructions and assertive forms. Supplementary strategies are presented in embedded clauses, which justify committed FTAs.

The imperative mood involving FTAs in bald on-record strategies, without minimizing the threat to the newcomers face, is employed as strong imposition of Wikipedia rules to issues of respect. One should underline that for all languages the majority of explicit politeness claims are formulated in the imperative mood (e. g. *seek consensus, avoid edit wars, act in good faith, be open and welcoming to newcomers*). They are less frequent in the French and Russian versions than in the English one. A peremptory style is proper only for the English version.

Etiquette

Etiquette/Règles de savoir-vivre/Этикет is a multilingual page in which English, French, and Russian versions differ in presentation structure, size, and composition. Therefore, a statistical analysis has only been made for the introductory part, which has similar composition structure and topics in all three versions. This page describes the interactional behavior to be adopted by all members of Wiki-community regardless of their cultural differences. Only the introduction to the English version mentions the multicultural dimension of the Wikipedia project as a supplementary reason to give special consideration to effective collaborating.

The Russian version prefers statements that do not personally imply the reader (1), while the English and French versions alternate between the impersonal (2, 3) and the personal through the pronoun *you* (4, 5).

- (1) *Википедия призывает всех авторов смело вносить изменения, представляющиеся им (после ознакомления с правилами) полезными.*
- (2) *Criticism of another's edit [...] ought to be made clearly, directly, and explicitly [...].*
- (3) *[...] tous les participants se doivent avant tout d' arriver à un consensus.*
- (4) *Keep in mind that sarcasm cannot easily be conveyed in writing and may be misinterpreted.*
- (5) *Gardez à l' esprit que ceci est une encyclopedie [...].*

Substitution strategies are applied by means of assertive statements, which do not personally address the reader. Instead of being imposed with a rule to respect, the newcomer is implicitly advised without being personally addressed (1, 2, 5).

The English version uses the same personal structure for both parts of the statement, which is formed in the imperative mood with FTA, and the second one applies supplementary strategy to mitigate the imposition (6). In the French version, some supplementary strategies are applied through embedded clauses with personal addressing through the pronoun *you*, and substitution strategies are applied through the statements that do not personally address the reader (7).

- (6) **Avoid** use of unexplained scare quotes and other means of implying criticism or making indirect criticism **when you are writing** in edit comments and talk pages.
- (7) **Sivous vous sentez mal à l'aise à l' idée de changer le travail d' un autre, et que vous vouliez ajouter vos pensées, question ou commentaires sur l' article, l'endroit pour faire cela est la page de discussion de l'article.**

In all versions the imperative mood statements do not imply bald-on record strategies. In the English and Russian versions, only once imperative FTA is mitigated with supplementary strategies through the embedded clause (6, 8), while, the English and French versions, such as **keep in mind, gardez à l' esprit, essayez d'éviter**, do not impose any action but reinforce the substitution strategies applied by means of assertive statements (4, 5).

- (8) **Вслушивайте** доводы оппонента, **прежде чем укрепляться** в мнении, что ваша поправка целесообразна.

Only one bald-on record strategy is used in the English version (9):

- (9) **See also the essay 'Avoid personal remarks' for a viewpoint on the latter form of criticism.**

Two statements in the French version (10, 11) and in the Russian version (12) can be considered to apply a positive politeness strategy that encourages the contributors to modify the articles' content.

- (10) [...] **n' hésitez pas à modifier les articles des autres.**
- (11) **Vous n' avez meme pas besoin de vous identifier pour contribuer [...].**
- (12) **Хорошо это или плохо, но Википедия призывает всех авторов смело вносить изменения, представляющиеся им (после ознакомления с правилами!) полезными.**

The English version employs more substitution strategies than supplementary, so it lacks additional arguments in statements where imposition is substituted, especially with such 'strong' modal verbs as **ought** or **must** (13). The statements (2, 13) could be perceived as FTAs with the grammatical subject **you**, but they apply a substitution strategy with the subject **criticism**, which causes the imposition on contributors to be perceived as impersonal:

- (13) **Of course criticism communicated in any manner and concerning any subject must be civil...**

In the French version, if substitution and supplementary strategies are balanced, they are sometimes structured so that two supplementary statements strengthen one substitution statement in order to give additional arguments for substituted imposition (7). Except for (8) and (12) in the Russian version, all other statements are balanced. Both strategies are applied, substitution and supplementary, such as (14) where an embedded clause gives an additional argument for eventual imposition which is substituted in the main clause with an assertive statement with a modal construction:

- (14) **В случае если такая отмена была сделана, автор спрорной правки может обсудить ее правильность.**

The statistical data presented below in Table 2, point out the politeness strategies occurrences on the pages **Etiquette/ Règles de savoir-vivre/ Этикет.**

politeness strategies language	Negative politeness strategies		Bald on-record strategies	Positive politeness strategies
	substitution strategies	supplementary strategies		
English (<i>Etiquette</i>)	8	4	2	–
French (<i>Règles de savoir-vivre</i>)	9	9	–	2
Russian (<i>Эмукем</i>)	5	6	–	1

Table 2. Politeness strategies in the Etiquette page

On these pages, positive politeness strategies are again rather infrequent. In the French version, contributors are encouraged to participate more than in the Russian version. The same negative politeness strategies are used for all languages. Nevertheless, supplementary strategies are as frequent as substitution ones in French and in Russian. On the English page, they are twice as infrequent. Since supplementary statements support substitution statements with mitigated imposition, the English version is less argumentative than the French and Russian ones. In the English and French versions, most of the FTAs are substituted with modal constructions, impersonal constructions being occasional. In the Russian version, the substitution strategies are realized through assertive forms. The Russian version uses less instances of the personal form *you* when addressing the reader. The English version applies the bald on-record strategy only once, while all the imperative mood forms in French and Russian apply negative politeness strategies.

Civility

Civility/Esprit de non-violence/Эмичное поведение is a multilingual page in which the English, French, and Russian versions are significantly different, even if they all describe commonly used appropriate ways of collaborating and avoiding conflicts. A statistical analysis has also been carried out only for the introductory parts, which share similar composition structure and topics.

As on previous pages, the Russian version uses positive politeness strategies once in the same way. The English and French versions use modal constructions to substitute FTAs. The statements addressing the contributors alternate with the statements, which do not personally address the contributors. On the Russian page, personal implications of contributors are always substituted with such grammatical subjects as *participants, editors* or impersonal statements. The French version is the most argumentative, by implying well-developed supplementary strategy statements that explain the reasons of implicit impositions (1):

- (1) *À partir du moment où vous ressentez la nécessité de suivre pas à pas les interventions d'un éditeur en particulier (fût-il réputé pour avoir une orthographe déplorable ou une syntaxe française aléatoire), au lieu de concentrer vos efforts sur votre domaine de compétence préféré, vous êtes sur la voie du conflit de personne.*

The Russian version applies more indefinite pronouns and adjectives, such as *some, other, sometimes* than the English and French ones that do the same, so as to decrease the imposition of any obligation on contributors (2).

- (2) *When discussing these differences some editors can seem unnecessarily harsh, while simply trying to be forthright.*

There is not any occurrence of bald on-record strategies for the French and Russian versions. As on the previous pages, in the English version bald on-record strategies are rather frequent; they are implied by the imperative mood without any mitigation (3):

- (3) *Resolve differences of opinion through civil discussion; disagree without being disagreeable.*

The statistical data presented below in Table 3, point out the politeness strategies occurrences on the pages *Civility/ Esprit de non-violence/ Этичное поведение*.

politeness strategies language	Negative politeness strategies		Bald on-record strategies	Positive politeness strategies
	substitution strategies	supplementary strategies		
English (<i>Civility</i>)	7	5	6	–
French (<i>Esprit de non-violence</i>)	7	7	–	–
Russian (<i>Этичное поведение</i>)	9	5	–	1

Table 3. Politeness strategies in the Civility page

All three versions are highly argumentative, but their structure differs. The French version underlines the two ways that allow the avoidance of conflicts. The first one, suggests avoiding editing wars related to an article's content. The second one, dealing with personal attacks, concerns the communicative style to be used during collaboration. The English and Russian versions also deal with both these sources of conflict, but the explanations about evolving conflicts, their consequences and resolution are not separately structured as is done in the French version. Neither version seems to suggest a strictly argumentative page structure for describing conflicts and resolutions. Although both have a paragraph dealing with incivility, on the English page conflict resolutions are stressed and on the Russian page the consequences of uncivil behavior are described. The first paragraph in English *Avoiding incivility* gives illustrations of uncivil situations and suggestions for avoiding them. The second paragraph describes incivility. In the Russian version, two terms are confused and alternated, civil and ethical behavior, with no distinction made between them. The English and Russian versions appear to be more empirically based than the French one. Since they give a lot of examples in describing conflict situations, they can be grounded in the contributors' personal experiences gained from Wikipedia collaborative practices. Both pages are more verbalized and more circumstantial than the French version, which attempts to give the most generalized presentation of conflict resolution. The French version deduces a very important thought proper to second-order politeness discourse. It states that impartiality of collaborative work would not result from individual will, but from the common effort of all members of the Wikipedia community. Thus, if politeness in the discursive approach indexes the dynamic aspect of social language use, the appropriateness of linguistic behavior, which Watts (Watts 2005b: 43) has termed as politic behavior, is 'geared towards maintaining the equilibrium of interpersonal relationships within the social group'.

Discussion - Conclusions

Analysis of politeness discursive practices has been applied on three Wikipedia pages discussing interactional behavior recommended to the members of the Wiki-community. The rules that govern Wikipedia content production are found to be imposed on all contributors, regardless of their cultural differences. In order to mitigate imposition of rules, different politeness strategies are applied on these pages for all languages. Empirical data on linguistic forms are preferably chosen in politeness discourse in different Wikipedia linguistic communities, stressing the discursive practices adopted in each of them.

The Wikipedia pages that talk about politeness in the collective work of contributors implicitly involve first-order politeness, since linguistic forms applying politeness strategies are chosen. As politeness topics, such as correlation between indirectness and politeness or politeness as dynamic social construct are discussed on the English and French pages, they can be considered as second-order politeness discourse. The results obtained from different pages are quite stable for every language. The emphasis of every Wikipedia linguistic community on particular linguistic forms which imply particular politeness strategies allows for double interpretation,

culturally and/or ideological. Strategies stressed by different Wikipedia linguistic communities can index cultural preferences in politeness discourse impelling the language; however, the choice of strategies can be explained by ideological transformations in Wikipedia.

(a) *Cultural interpretation*

Our findings about politeness discursive practices on Wikipedia pages point out that the English version is less verbalized in comparison with the French and Russian ones. As Holtgraves and Yang (1990) have shown, the perception of imposition varies inversely with the wording costs for the addressee, while, more verbalized statements are usually considered as more flexible for the addressee, since imposition forms are mitigated through additional statements. Both the French and Russian versions are verbalized through participle constructions, namely embedded and independent statements. Excessive verbalization on these pages allows giving newcomers necessary arguments that explain why the Wiki-community not only imposes interactional rules, but also meticulously observes their adherence. The English version is perceived as more peremptory. In short, the imposition is less mitigated on English pages where indirectness is deliberately avoided. These results confirm Ting-Toomey's speculation (1998) about individualistic-collectivistic, low-high context cultures.

The Trompenaars cross-cultural studies (Trompenaars and Woolliams 2003) confirm that French and Russian communication styles are really defined as collectivistic and high-context. Trompenaars and Hofstede's³ research view French and Russian cultures as collectivistic even if Trompenaars seems to be surprised by the result obtained through his studies, since France is commonly perceived as attached to individualistic values. However, he underlines that the French are highly devoted to the social community, whereas they become individualists in other social encounters. Russian and French communication styles are described as high-context ones. People in high-context cultures adopt a role-orientated style emphasizing the social roles held by the participants and different scripts are used depending on role relationships, so they prefer an indirect communicative style that is confirmed in high verbalization of the French and Russian versions.

Guirdham (1999: 153) argues that for people of low-context cultures, such as with Anglo-Saxon, interactions are much more ritualistic. In low-context communication one uses a personal style, which emphasizes personal identity over social position. Since role relations and status differences are less important, communication style is less formal but more logical and linear. This can explain why on all English pages analyzed above, more bald on-record strategies can be identified than on the French and Russian ones. The English version attempts to avoid indirectness, willing to be easily understood by the contributors for whom English could be the second language. Therefore, using the pronoun *you* more frequently, they prefer to directly address the addressee, in contrast to the French and Russian versions. The explicit style of imperative enunciations of English versions is preferred in low-context communication emphasizing *I*-identity.

According to cross-cultural studies, the individualistic low-context cultures, such as the Anglo-Saxon choose a solution-orientated style, while collectivistic high-context cultures, such as French and Russian, prefer affective-orientated style. The pages considering conflict resolution confirm the divergence of communicative styles. The English version gives a long list of advice about how to resolve the conflict situation before describing it, whereas the Russian version points out the affective consequences of conflict situations. Both the solution-oriented and affective-oriented styles, can explain highly empirical descriptions of conflict situations in English and Russian. A number of different cases mentioned allow suggestions for various ways of conflict resolution in the solution-oriented English version. For the Russian affective-oriented version, the same illustrative structure of presentation underlines emotional implications of conflict situations, in order to persuade the contributors to avoid them or resolve them efficiently.

Divergence of communicative styles can also explain why positive politeness strategies are more frequently applied on French and Russian pages than on the English pages. Positive politeness is not functionally and rationally grounded in the pages that impose rules. The only goal for applying positive politeness is to support contributors in their willingness to participate and collaborate in the project, which is

obviously not the topic of these Wikipedia pages. Therefore, the English version does not apply the strategy, which has no pragmatic issue in the given context.

Although most of our findings can be interpreted with cross-cultural studies, more profound analysis of politeness discursive practices on Wikipedia will allow a greater understanding of how individual linguistic choices impact oriented linguistic preferences culturally and socially. Since cross-cultural explanation for different politeness discursive practices on Wikipedia needs more detailed research, we suggest one further interpretation for divergence of Wikipedia politeness practices.

(b) Ideological interpretation

Stegbauer, in an interview (Stegbauer and Currie 2005) on cultural transformations in Wikipedia, treats the cultural aspect completely different to its common use. His interpretation focuses on Wikipedia community's ideological profile. Stegbauer points out a shift in the Wikipedia project from 'emancipation ideology' to 'production ideology'. The principal task of Wikipedia was completion and the key concept was 'everyone can participate', which contradicts the idea of 'expert knowledge' provided by trusted and selected experts who produced encyclopedic content. The Wikipedia participatory model was based on voluntary collaboration of people who were motivated to participate by the motto: *Everyone can contribute a piece of knowledge – the first steps are easy!* However, the participative or emancipation ideology has been changed to: *Good authors are always welcome here – the first steps are easy!* This shift from quantity to quality supposes: *'not everyone is suited to write articles. To honor the requirement of quality, it is necessary to implement certain parameters for production'*. Stegbauer argues that:

although newcomers are theoretically welcome, they are considered problematic for causing additional work by more experienced users who understand the negotiated standards or have experience with disputes, or maybe because of cultural differences. Experienced users who have been around for a while wind up distancing themselves from less active or new participants. (Stegbauer 2005: 342)

Each ideological change implies the transformation in power discourse when new discursive dominant features appear. In fact, Stegbauer confirms that a '*ruling class*' has appeared in Wikipedia that is:

composed at the top by formally endorsed administrators. Admins are selected according to a special electoral procedure; in order to stand for election, a user must have attained a certain level of trust by adhering to the norms and establishing a committed position on topics. (Stegbauer 2005: 346)

We suggest that this ideological shift should be referred to in Wikipedia politeness discourse. Besides linguistic cultural dimensions, ideological dimensions would explain divergence of politeness strategies. Our hypothesis, which requires more in-depth research about multilingual Wikipedia pages, supposes that 'production ideology' and 'emancipation ideology' apply different politeness strategies. 'Production ideology' shared by a '*ruling class*' of experienced users, which consider newcomers problematic, tends to apply bald-on record strategies without any mitigation for newcomers, use more direct communicative style, and stress *we* forms in order to underline the solidarity of community and to distance newcomers. 'Emancipation ideology', on the contrary, stresses positive politeness strategies and various forms of mitigation for any imposition, in order to attract newcomers to produce cooperative knowledge.

NOTES

1. <https://en.wikipedia.org/wiki/Wiki> [accessed April 25, 2015]
2. <http://en.wikipedia.org/wiki/Wikipedia:Wikipedians> [accessed April 25, 2015]
3. Geert Hofstede. <http://geert-hofstede.com/> [accessed April 25, 2015]

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Sensitivity of the Chinese Web: A Techno-Semiotic Perspective into the Scriptural Economy of Chinese Computerised Media

Allan Bahroun

This article intends to create a dialogue between ongoing discussions in French techno-semiotics and the contemporary debates about the 'Chinese Internet'. Resorting to Yves Jeanneret's interpretation of Michel de Certeau's scriptural economy, the author demonstrates that a techno-semiotic approach to computerised writing yields conceptual resources to disentangle the research on the Chinese Web from its ideological polarisation. The text articulates three explanatory matrices to address the profound semiotic mutations characteristic of the development of computerised media. The first matrix discusses the applicability of the scriptural economy to the domain of computerised writing; the second produces a critical definition of the popular notion 'sensitive words' and more generally elaborates on the construction of 'web sensitivity'; the third offers a series of documented observations into the political economy of China's Internet-Service Providers and presents hypotheses on the dynamics of technological surveillance. These three matrices, interwoven around the specific case of China's computerised media industries, allow the author to make a tentative contribution toward a broader reflection on the semiotics of the Web.

KEYWORDS scriptural economy; techno-semiotics; web sensitivity; computerised devices; Chinese web

Introduction

There is neither a first nor a last word and there are no limits to the dialogic context [...] Nothing is absolutely dead: every meaning will have its homecoming festival. (Bakhtin 1986)

... this is the last fragment written by Bakhtin in 1974 (Todorov 1981)

The story is written in the form of a diary, and the last entry, from 2025, ends with the announcement: Comrades, in all online language there is only one term left: 'sensitive word!' (同志们，现在所有网上的汉字只剩下‘敏感词’啦!). (*GFW Story* — GFW历史) (Li 2012)

A satire posted by a netizen on a social media site (Ash 2014)

On June 25, 2012, an Internet blogger published a short story about an augmented version of the 'Great Firewall'. The 'GFW Turbo' escapes the power of the authorities and starts censoring keywords automatically. The agents of the 'Anti-GFW Ministry' are unable to regain control over the machine, which forbids the use of the entire Chinese language, except for this very last phrase: 'sensitive word'. Set against Bakhtin's pithy last word, the fictionally anticipated suppression of a whole language highlights the governmental hubris of trying to block the dialogic character of language itself. The utopia implied in the former is the dread of the latter, and this tension between infinite semiosis and the coercive management of meaning through technology, sets the tone for our discussion.

China's Internet is said to be one of the fastest-growing on a global scale. According to the 35th report of the national institution responsible for issuing the Internet's development statistics, China, 'as of December 2014, had an Internet user base of 649 million and an Internet penetration rate of 47.9%' (CNNIC 2015). Given its spectacular growth over the past 20 years, the Chinese Web has been attracting worldwide scholarly attention. The field of the so-called 'Chinese Internet Research' is at the intersection of numerous disciplines. Social psychology, political science, cultural studies and communication science all are interested in 'China's digital revolution' (Brown 2012).

In the midst of such intense and cross-disciplinary concern, censorship and surveillance, the 'Great Firewall', ICTs, and social change, have constituted the major and somewhat restrictive topics of interest. As David Herold and Gabriele de Seta pointedly observe, in their recent meta-review of research, the 'Chinese Internet' has constantly been portrayed as a highly agonistic environment (Herold and de Seta 2015) with 'surveillance' and "control" being the most often recurring keywords in discussions about it. Concomitantly and paradoxically, 'a general paradigm of revolutionary change focused on "China's political transformation" still appears to be one of the main drivers of research' (75). For the past ten years, sociological contributions have been made to this expanding area of study. In this context, however, semiotic investigations have been almost non-existent, leaving an important space of inquiry untouched: the social and symbolic significance of computerised media's emergence in contemporary China. Bridging the gap between two distinct research communities, this paper wishes to open a dialogue between French techno-semiotics and the contemporary research approaches to the 'Chinese Internet'. In doing so, I aim to demonstrate how the techno-semiotic perspective can yield conceptual resources capable of disentangling the research on the 'Chinese Web' from its characteristic ideological polarisation.

This paper will engage in a synchronic overview of the material forms and social activities associated with the Chinese computerised media, attempting, at the same time, to test the heuristic value of the techno-semiotic approach. The originality of this perspective lies in its consideration of the complex articulation of the technical, logistic, cultural, and symbolic strata that constitute computerised media. Unlike most contemporary approaches to what is commonly called 'digital media'—such as web-design, ergonomics, cognitive psychology, online marketing or even engineering sciences—the techno-semiotic perspective refuses to regard them either as mere technical instruments or as exclusively cultural and social artefacts. Its theoretical stance draws from an epistemology of representation according to which the forms produced in media textualities 'create a signifying universe that does not simply reflect the social reality but instead participates in its construction' (Souchier and Jeanneret 2009). The theoretical development of techno-semiotics, based on more than twenty years of empirical investigation and collective elaboration, as well as its related lexicon have been extensively discussed by Yves Jeanneret in his recent *Critique de la Trivialité* (Jeanneret 2014; Jeanneret et al. 2013), where he also refers to a number of researchers sharing a similar theoretical orientation. Following the techno-semioticians, I refer to computerised media (*médias informatisés*) as media devices (*dispositifs médiatiques*) which enable the production and circulation of writings on computer networks and across a whole range of materials. Jeanneret contrasts the term computerised media with the problematic notion of Information and Communication Technology (ICT) so as to emphasise the 'patterning' character of computerised media, perceivable in their capacity to mobilize historical forms and to integrate a broader media culture (Jeanneret 2007). In one of the rare English-language articles on techno-semiotics, Estrella Rojas develops the 'staging device' metaphor to highlight the framing effect of computerised writing. Rojas suggests borrowing the term 'device' from its theatrical context to underscore the particular 'setting' of relations at play in digital textualities. She argues that '[t]he screen may be flat but behind it, there is a complex interplay of calculations, event combinations, interferences and flows whose effects must be considered for proper analysis of onscreen texts. That which is visible at the surface and all that is coded for machine-readable language belong to two separate domains' (Rojas 2008). Onscreen texts or computerised writings are, therefore, better described with the term *écrits d'écran* in French, which I translate as screen scripts: a form of writing which associates individualized *semiotic* production

on the screen, with multiple *technical* inscriptions into computer language (Emmanuel Souchier and Jeanneret 2005).

The Scriptural Sophistication of Censorship

The 'Cat and Mouse' Game Behind the Great Firewall

In February 2015, six months after China's Cyberspace Administration organised a *World Internet Conference* in Wuzhen—arguing for a national model of governance—the state-owned newspaper *China Youth Daily* unveiled the 'new anthem' of China's Internet. Especially styled 'Cyberspace Spirit' (网信精神), a grandiloquent musical performance openly praises the 'cleanliness' and 'safety' of China's controlled Internet (Chin and Wong 2015). This glorification of the geopolitical ambition to become an 'Internet Power' (网络强国) arises as a continuation of historical measures adopted by the government to 'civilize' the social activities occurring in the cyberspace.

As early as 1999, four years after the emergence of an Internet infrastructure in China, the National Computer Network and Information System Security Administration Centre utilised the technical capacities of computer scientists and engineers to develop a global architecture, in order to monitor the productions of Chinese Internet users (*The Economist* 2013). With President Hu Jintao's initiative, Internet management was referred to as an instrumental element to foster a 'Harmonious Society', thus requiring 'Web control to be strengthened' (Bandursky 2011). From the very beginning of its existence, China's Internet has been, in fact, the object of considerable investment to equip governmental agencies with new instruments of surveillance, also discursively framed as 'Opinion Monitoring' (Wang and Zhu 2015).

Early occurrence of the expression 'Great Firewall' can be traced back to an article published in *Wired* by Geremie R. Barme and Sang Ye. This metaphor has served to define the most widespread understanding of China's Internet model: '[u]nder construction since last year, what's officially known as the "firewall" is designed to keep Chinese cyberspace free of every kind of pollutant, by merely requiring ISPs to block access to "problem" sites abroad' (Barme and Ye 1997). Since then, the phrase has acquired a great deal of popularity, and however problematic the term could have been, it remained an object of fascination for Western academics and foreign commentators.

At the core of the continuous reference to the 'Great Firewall' is the agonistic notion of *contention* between the strategically planned actions of the government and the tactical reactions of always more 'savvy netizens', resulting in the common metaphor of the 'cat-and-mouse game' (Morozov 2009). Torn between the euphoric pole of 'empowerment' and the dysphoric one of 'censorship', the 'Chinese Internet' has been described as a global arena within which little space was ever left to non-teleological conceptions of politics and cultural practices (Marolt and Herold 2014).

Even more problematic is that such binary oppositions have fostered a unifying representation of the 'Chinese Internet', whose main characteristic was the risk affecting 'sensitive' activities to be obliterated by governmental procedures. This totalisation of the 'Chinese Internet', under the oppositional terms strategy/tactic, has hindered the development of more accurate explorations of surveillance operative modes. It persists today with the eschatological announcements of 'China's Self-Destructive Tech Crackdown' (NYT Editorial Board 2015). When faced with the homogeneous Internet Censor, one needs to be reminded of the complexity of Internet technological surveillance:

China's filtering regime is pervasive, sophisticated, and effective. It comprises multiple levels of legal regulation and technical control. It involves numerous state agencies and thousands of public and private personnel. It censors content transmitted through multiple methods, including Web pages,

Web logs, on-line discussion forums, university bulletin board systems, and e-mail messages. (OpenNet Initiative 2012)

This research report from 2012 produced by the OpenNet Initiative concludes with the unambiguous yet sceptical statement: ‘This combination of factors leads to a great deal of supposition as to how and why China filters the Internet. These complexities also make it very difficult to render a clear and accurate picture of Internet filtering in China at any given moment’.

Similar to the ‘Great Firewall’ and its discursive trajectory, the conceptual dyad strategy/tactic, introduced by Michel de Certeau in his *Practice of Everyday Life*, also became a popular concept. In the third part of his *Critique de la Trivialité*, Yves Jeanneret places those seemingly oppositional terms into the broader inquiry of the *scriptural economy*. By contrast to their frequently simplistic use, however, Jeanneret discourages us from taking them as representing a rigidly bipolar opposition between the panoptic strategies of power, on the one hand, and heroic resistance to them, on the other. Certeau’s conception is not reducible to a theory of linear domination and therefore, the relationship between strategy and tactic must be understood as a dialectical one (Jeanneret 2014: 377-378). Certeau described *writing* as a ‘project to rationalize social life’ and Jeanneret specifies that ‘while power is written as fiction, it unfolds through material devices; yet no distinction between a fully virtual world on one side and the real social mechanism on the other is possible’ (364).

From Obliterative Censorship to Topographical Control

In this section, I explore the definition of strategy and tactic presented in the *Practice of everyday life* and interpreted by Jeanneret. I argue that the *obliterative predilection* of censorship should be completed with a *topographic conception* of computerised control. This shift of perspective primarily implies a greater consideration for the techno-semiotic properties of computerised media, designated by Jeanneret as a *new scriptural economy*: ‘a controlled environment where the force of the power of writing and reading intersects with the ruse of practices, which are able to deal with this power’ (378). Let us recall the terms of strategy and tactic from Michel de Certeau’s own words.

[Strategy] postulates a *place* that can be delimited as its *own* and serve as the base from which relations with an *exteriority* composed of targets or threats [...] can be managed.

The space of a tactic is the space of the other. Thus it must play on and with a terrain imposed on it and organised by the law of a foreign power. (Certeau 1988: 36-37)

Building on this seminal distinction, Jeanneret expands the Certalian inquiry by applying two critical modifications. Those interpretive alterations are all the more critical, since they address the very distribution of *writing* and *reading*, as dynamic practices, between the poles of strategy and tactic in the specific context of computerised media.

Jeanneret reminds that ‘[t]he political operativity of writing is at the junction of its logistic dimension and its symbolic reach’ (375). As originally explained by Certeau, writing is a ‘space with the dual ability to establish a frontier and to create a representation’ Consequently, ‘writing is a process, a machine, which has the capacity to entangle a technical, a semiotic, and a political dimension’ (375). In spite of the critical value of this perspective, the contemporary dynamic of computerised media implies the reconsideration of the logic of the *scriptural economy*, so as to highlight its new and highly specific techno-semiotic configurations. Therefore, ‘provokingly and yet seriously’, Jeanneret contends that ‘in the domain of computerised media, the power is in the capacity to *read*, while the usage is under obligation to *write*’ (386). This considerable reversal of perspective accounts for one of the most profound metamorphoses in the sphere of semiosis. Firstly, unlike most interpretations, with an oral communicational trope, along the lines of tools for *expression* and spaces of free

speech, computerised media combine a blurring of writing, reading and working activities. Secondly and maybe most importantly, 'a number of non-inscribed social practices are today the object of writing and inscriptions (referred to in a convenient way as *traces*)' (387).

Applied to our discussion of China's Internet censorship, such specification provides critical insight. Indeed, instead of perceiving censored words as the expression of a hunt between creative netizens and government agencies, one should recognise that *obliterating* actions reveal the efficiency of a far-reaching *topographic* monitoring. In his commentary of the technological conditions of possibility for Internet control in China, Nathan Freitas states this idea in very concrete terms: 'it means that they can read what people write both on a global scale and at a small level' (Freitas 2014). In a similarly manner, Clément Renaud compares traditional media with computerised ones in China: coercive practices in the latter, he argues, 'are not only focused on the order of discourse but are also increasingly interested in the process of individuation, notably through the multiple acts of utterance that form up the practices and uses of the web' (Renaud 2014). In what could also be read with a Certalian inflexion, Renaud concludes that the 'strategic goal of computerised media is located today in the definition of fragments of spaces for utterance' (41). A topographic conception is inherent to the dynamics of the *scriptural economy*. It allows to adopt a micro-level observation for computerised media. Additionally, it is more fruitful to 'localize' censorship *within* the realm of computerised writing, rather than leaning toward the subsumption of the latter under China's expressed political aspirations. With that perspective, censorship may well be one of the many modes of intervention on ordinary practices into the text of computerised media. The examination only of their techno-semiotic properties can shed light on the existing forms of governmentality: in other words, and to paraphrase Jeanneret, the rationalisation of social conducts is irremediably linked to the computerisation of text.

Sensitive forms: Dealing with visibility?

Weixin is a computerised media application promoted and exploited by the *Tencent* communication corporation. There are currently more than 100 million users of what is called *WeChat* in its English version outside of China. The 'messaging app' presented as an efficient and technically richer alternative to *Viber*, *WhatsApp* or *Line* has been subject to intense marketing campaigns and has been expanded considerably in Brazil, Spain, Thailand, and even India (Kemp 2015). All countries, in which *WeChat* is present as the fastest 'growing messaging app', have distinct policies as regard to Internet governance. Interestingly enough though, *WeChat* has enabled Chinese authorities to monitor and alter the visibility of certain productions, beyond the national borders of China:

If you are in San Francisco, and you join a WeChat group that is sympathetic to Tibetan self-immolations or the Uighur community, and some members of that group are located in Tibet, Xinjiang, and China, then all of your messages and the fact that you are participating in that group chat are communicated to servers managed by Tencent, licensed under the authority of the Chinese government. Since your WeChat account is tied to your real phone number and SIM card, and your full address book is accessible by the app, then your real name and entire community are now flagged as being sympathetic to groups that China considers as harmful, such as the Islamic State or al-Qaida. (Freitas 2015)

We note here the problematic encounter between topographies of computerised media and national territories. The attempt of the corporation to distinguish between the Chinese version of the application (*Weixin*) and its international brand (*WeChat*) has served to attract greater attention to the semiotic dimension of the device while, on a technical level, as Freitas remarks, 'what we've seen is that there are more and more

features for domestic tuning, keyword censorship lists, based on sim card or geography or carriers' (Freitas 2014).

If the central *modus operandi* in the scriptural economy consists of shaping sites and delineating terrains—where modes of observation, inscription, and collection are to be systematically developed—then 'sensitivity' can rightly be understood as a 'management of visibility' (Yang 2014). We arrive, therefore, at a first specification of the techno-semiotic phenomenon contained in the popular idea of 'sensitivity'. 'Sensitive', here, not only refers to the textual and discursive dimension of a digital objects (the so-called 'sensitive content') but also to what one could call the horizon of circulation, the projected range of audience, the potential reach across different spaces, constructing specific media topographies. In other words, the sensitive degree of certain forms depends on their thematic value as much as on their 'assumed visibility'. This 'management of visibility', as we've seen, transcends national borders. The computerization of text, in itself, renders both polymorphic and polytopic observation of ordinary media practices possible and efficient. This example, among many other cases of sophisticated surveillance in the post-Snowden context, highlights the need to pay greater attention to the socio-political dimension of computerised media's 'features'. Ultimately, the suggested understanding of computerised media broader scriptural economy, as exemplified by *WeChat*, leads us to question regionalising discourse on nationally or culturally bounded 'Internets'.

A New Scriptural Era? Micro-media and micro-power

Ambivalent Features of China's Internet Giants

Born at the turn of the 2000s, computerised media corporations in China have grown so prominent that they currently constitute the underlying texture of everyday practices for hundreds of millions of individuals. *Baidu* (a search engine), *Tencent* (a messaging and communication group) and *Alibaba* (an online market-place) have reached a level of ordinary presence in China that could have baffled even Certeau's most astute predictions. The three giants are now commonly referred to as the BAT, a geopolitical competitor of the Silicon Valley's GAFA (Google, Amazon, Facebook, and Apple). At the very top of 2014's Chinese ten largest fortunes, the BAT were ranked in the following order: Jack Ma (\$19.5 B) CEO of *Alibaba*, Robin Li (\$14.7 B) CEO of *Baidu*, and Ma Huanteng (\$14.4 B) CEO of *Tencent* (Flannery 2014).

In a recent article published by *China Xinhua News Agency* on its English Website, one would read the perplex statement from the editor: 'Booking a taxi, ordering food, reading the news, watching movies and playing games—the seemingly infinite number of apps on the Chinese market, gives the illusion of an open, competitive market' (Xu 2015). When faced with such oligopolistic configurations, an investigation into the techno-semiotic conditions of possibility for China's Web Services industry becomes more necessary than ever. Besides, one easily understands why the euphoric terminology ('start-ups', 'social media', 'digital platforms', 'apps' etc.) fails to signify the political amplitude, the social reach, and the financial dimension of this category of actors, pillars of the new scriptural economy.

Chinese officials are nowadays eager to credit China's Internet control system with the worldly success of the domestic champions. At a recent press conference, an official from the Ministry of Industry and Information attributed this success to the 'good policy environment' and, more explicitly, to the 'Great Firewall' policy, implemented by the Chinese government (Zhao 2015). Undeniably, the 'Great Firewall' has played an instrumental role, particularly at an early stage, in diverting traffic from the established foreign corporations to the emerging domestic ones. Recent ethnographic observations, however, reveal that Chinese Internet users are highly reflexive about their activity of *fanqiang* ('wall-leaping') which constitutes a series of small logistic arrangements such as the use of a VPN (de Seta 2014b, Valentine 2015). Additionally, the cultural relevance and the plethora of diversity of content in Chinese are to be found on *Baidu*, *Tencent*, or *Alibaba*, to cite just a few, and not on their international counter-parts.

Nonetheless, China's computerised media corporations have to face a paradoxical choice and adapt their strategic development to the 'good policy environment' while retaining their users within their scriptural fields. In exchange for its protectionist policies, the Chinese government expects the Internet corporations to implement censorship and self-censoring practices. The most extreme case of this tension 'between market and politics' (Pang 2015) is *Weibo*, the micro-blogging company created by *Sina Corporation*. Within three years after its creation, in 2012, it has become the most popular Web company, attracting 309 million of the 420 million China's Internet users (CNNIC 2013). Concentration of visibility has subjected *Weibo* to intense control and since the beginning of the 2010s user accounts have started to be deleted. In early 2014, the CNNIC declared that *Weibo* was losing 10% of its users (He 2014). Today, some commentators even predict the 'death of *Weibo*':

Weibo has never been a pure social media platform; it has always been a form of media, and its vitality arose from disseminating and commenting on public events. [...] A user becomes a criminal, punishable by law, when a rumour is shared over 500 times, and reposting a 'rumour' can be a liability too. One constantly hits on 'sensitive words' like hitting on nail snags. (Bei 2014)

In November 2014, the State Internet Information Office (SIIO) obliged 29 computerised media companies to 'sign a pledge, promising that they would "discipline" online comments'. SIIO's Deputy Director declared that, '[We must] use the law to manage online comments in order to direct public opinion online [...]'. The companies agreed to suppress 18 categories of online comments including: 'information that endangers state security or undermines national unity', 'rumours that disrupt social order', 'vulgarity and pornography' or the 'use of languages other than commonly used languages' (Bei 2014). In a highly competitive scriptural economy, computerised media's main purpose is to maximise the retention of users, whose 'traces' constitute the principal source of symbolic and economic value (Candel 2013). While they are commonly taken for granted, it is remarkable that the commercial 'indicators of visibility' (*likes*, *retweets*, *views*, etc.), produced within the techno-semiotic environments of computerised media, become the gauge and the instrument of government interventions.

The Invisible Makings of the Architext and the Textware

While *Weibo*'s user population has decreased, *Weixin* has seen a growth previously unseen in the global industry. Also called 'China's messaging app', *Weixin* has reached a total number of 440 million monthly active users by January 2015. 'An average day sees more than 3 billion webpages shared on Moments. Some 76.4% users check Moments regularly to share or consume content shared by their contacts' (Xiang 2015a).

Wei-bo and *Wei-xin* share the same prefix (*wei*), respectively translated as 'micro-blog' and 'micro-message'. Gabriele de Seta situates the proliferation of the prefix into the larger contemporary imaginary called the 'micro-era' (*weishidai*) 'prophesizing the developments of communication technologies in China'. According to him, '[a]fter *Weibo* and *Weixin*, everything Internet-related seems to require miniaturisation: from commercial transactions, with *weihuo* (micro-goods), *weiguanggao* (micro-advertisement), and *weizhifu* (micro-payments); through business, with *weiguanli* (micro-management), and *weitouzi* (micro-investment); to cultural consumption, with *weidianying* (micro-movies), *weixiaoshuo* (micro-fiction), and other *weimeiti* (micro-media)' (de Seta forthcoming).

In the context of techno-semiotic investigation the first term to be developed was the architext (*architexte*). Its emergence at the end of 1990s expressed the desire to shed light on a situation where, as Certeau would put it, social subjects had to *deal with* computerised media. Overcoming the idealist conception of the hypertext, the architext emphasised the instrumented visibility constructed on the space of the screen (Guichard 2010; Jeanneret 2014; Jeanneret and Davallon 2004). The architext was conceived as the origin of the writing

practice and as the power imposed on it (*arkhein* in Greek both signifies to begin and to command). In other words, when speaking of the architext, one refers to 'the presence of devices preceding and regulating the user's writing, conditioning both its format and its resources' (Jeanneret 2014: 427).

When looking more closely at *Weixin's* techno-semiotic architecture, one notices the disposition of various writing spaces: the device articulates four major components 1) instant messaging 'chat', 2) contact list and group discussion list, 3) list of publication called 'moments' ('friend roll' in Chinese 友圈), 4) series of extra-devices such as online games or geo-localization of individual users. *Weixin* operates a strategic combination of previous standardised models, commonly identified on *Facebook* and *Twitter* as the timeline, by adding an efficient and pragmatic instant messaging competing with *Viber* or *What's App*. This micro-scriptural environment hosts daily practices and connect itself to the preexisting *QQ* account system, an extremely popular forum belonging to the same *Tencent* group. Recent updates include the possibility to use account details as payment information for commercial services (Xiang 2015b). If *Weixin* has been widely compared to *Weibo*, the central *Micro-blogging* media created in 2009 by the group *Sina*, major differences in their techno-semiotic construction have been suggested to explain distinct degrees of 'sensitivity':

Weibo is a logical target for the government, since everyone can see almost all of other users' tweets, make comments on them, or forward them to others. On *WeChat*, by comparison, you can only see a post after subscribing to a public account or becoming friends with a private user. And the post can only be forwarded to your own circle of friends. (He 2014)

Such statements mistakenly infer from the semiotic level, the so-called 'interface', certain technical properties in terms of surveillance. However, counter-intuitive and reverse engineering analysis of the *WeChat's* technological protocols proved that the degree of inscription and monitoring was comparable, if not more accurate, than that of *Weibo* (Freitas 2015). Such misinterpretation of the articulation between 'technical and semiotic strata' highlights the need for a greater consideration of the architextual property of computerised media (Cotte 2004).

A second techno-semiotic concept, the 'textware' (*textiel*), was later coined to mitigate the limitations of the architext by redefining the distribution of roles between industrial agents and users and primarily by emphasising the extreme plasticity of the scriptural economy. If the architext led to a greater consideration for the conduct of users' writing, the textware highlights the constant remobilisation of users' traces in the interconnected fields of computerised media. Constant modifications in the 'visible order' of semiotic productions are enabled by the proficient exploitation of 'meta-data', whose presence in computational code enables the qualification and re-contextualisation of 'user-generated traces'. In short, the notion of textware points to the dual status of screen scripts, the very fact that they operate 'both at the technical and logistic level of inscriptions as well as at the cultural and semiotic level of writing' (Jeanneret 2014: 437).

Sensitive Emergence: Uncertain Governmentality?

Building on the first characteristic defining sensitivity—the management of visibility—we will proceed to redefine our understanding of this techno-semiotic phenomenon. There is need to integrate a second characteristic, based on the very *mediative* logic of computerised writing. 'Sensitivity' may indeed refer to the uncertainty of the monitoring process. The very plasticity of the scriptural fabric is conditioned by its multiple and heterogeneous layers—let us not forget that *textum* in Latin means inter-woven (Rojas 2008). Government agents, as well as Internet Service Providers, need to adjust to the emerging models of 'user traces' promoted by computerised media, and on which they base their political interventions and economic expansion, respectively.

The social activities government agencies want to monitor and control are far from being spontaneous and natural as the idea of *data* might suggest. In agreement with Jeanneret, we insist that 'the importance of the

scriptural economy prevents us from reading social practices without considering the properties of writing that are associated with them, *prescribes* them in the etymological sense of term (or, in Greek, *programs* them), and thus, configures the space within which they unfold and the tools they may use' (Jeanneret 2014). Computerised media define a space of collection, while providing also modes of interpretation for the social activities they authorize and condition. This problematic emergence of social activities, technically transmuted into apprehensible 'traces', does not undermine the importance of the semiotic inquiry; quite the contrary, according to Jeanneret: 'when faced with plasticity of inscriptive phenomena, generating the transformation of *signs* into *traces*, we need not to do *less* semiotic and documentary analysis, we in fact need *more and better* semiotic investigation to understand the contemporary scriptural economy' (2014: 411).

An (Impossible) Escape from the Scriptural Forces

The New Vocabulary of Dissent

Central to Certeau's project of the scriptural economy are the various ways social subjects *deal with* media and circumvent their forces: such 'ways of doing' (*manières de faire*) might be described but do not form a grammar. In the context of computerised media, those operations are conditioned by the properties of computerised writing, not only from the strictly technical level of the 'features' but according to the semiotic decision to 'use the architext and publicize social utterances' (Jeanneret 2014: 426). In the particular case of 'sensitive words' much attention has been devoted to the dynamic morphology and temporal transformation of keywords under constraint. However, most commentaries emphasized the creativity of 'heroic and savvy users' tweaking China's Online Censors' (Wines 2009). Commentaries have thus largely neglected the contingency of the techno-semiotic resources mobilized in those practices of 'circumvention'.

The specific interrelation of language and technology occurring in computerized media has given birth to surprising media artefacts, which in turn have generated a series of interpretations by foreign commentators. Under specific conditions where 'keywords' were targeted by coercive procedures or techno-semiotic regulations, some Internet users found ways to avoid hindrance of visibility and maintain interaction by altering the forms of their utterances. In the Chinese Internet research field, a theoretical category describes this changing phenomenon with the term 'morphs': alternate forms of pre-existing words or phrases to prevent the discussion from being censored (Le Chen 2013).

Those morphs have been a perpetual object of fascination for Western scholars and media analysts. An entry of the English *Wikipedia* is even dedicated to what has become the fetish of Chinese Internet resistance:

The Grass Mud Horse or Cǎonímǎ (草泥马), is a Chinese Internet meme widely used as a form of symbolic defiance of the widespread Internet censorship in China. It is a play on the Mandarin language words *cào nǐ mā* (禽你妈), literally, "fuck your mother", and is one of the so-called 10 mythical creatures created in a hoax article on Baidu Baike in early 2009 whose names form obscene puns. It has become an Internet chat forum cult phenomenon in China and has garnered worldwide press attention, with videos, cartoons and merchandise of the animal (which is said to resemble the alpaca), having appeared.

The case of the Grass Mud Horse reveals the creative and transforming character of *triviality* (Jeanneret 2008). In other words, the visibility of such a *cultural being* is actuated by its very circulation across various social spaces in and beyond the Chinese Web. Additionally, its semiotic value is enriched by the diverging interpretations and the distinct appropriation of the sensitive word in its mutable forms. I purposely refer to a Web encyclopedia to underline the processes of indexation and lexicalization to which sensitive forms are perpetually exposed. Several of the most prominent English language websites on the Chinese Internet display

their own 'dictionary' of the online language. Each of them elaborates the 'lexicon of dissent' and discusses the precarious encounter of the hindering forces of censors and the creative circumvention of users.

A recently edited e-book called 'Grass-Mud Horse Lexicon' was explicitly entitled *Decoding the Chinese Internet: A Glossary of Political Slang*. The e-book compiled by *China Digital Times* conveys this particular struggle of 'creative netizens' against 'internet censorship':

Know your grass-mud horse from your river crab. Organised by broad categories, 'Decoding the Chinese Internet' will guide readers through the colorful, raucous world of China's online resistance discourse. Students of Mandarin will gain insight into word play and learn terms that are key to understanding Chinese Internet language. But no knowledge of Chinese is needed to appreciate the creative leaps netizens make in order to keep talking. (Henochowicz 2015)

China Digital Times, as well as *China Media Project* or *ChinaSMACK glossary*, all provide their readers with valuable documentation on the semiotic and discursive practices of Chinese Internet users. Nonetheless, their portrayal of this antagonistic relationship between censors and users contributes to the formation of an extended politicization of media practices.

Translating the Chinese Internet

The discursive formation of a lexicon of dissent goes along with intense practices of inter-semiotic translation. Analyses of the 'sensitive forms', and of their transformations, operate as a reversed hermeneutics of power. To borrow the words from the ONI Report quoted above, the complexity and pervasiveness in the modes of control create an irreducible uncertainty as to 'how and why China censors the internet?' (OpenNet Initiative 2012). Consequently, this encounter embodies itself most visibly in the new terms arising in the process of 'morphing' and 'changing sensitive forms'.

The use of the term 'inter-semiotic translation' explicitly evokes Paolo Fabbri's semiotic conception of language understood as more than 'a mere sum of words' (Fabbri 2008). The act of translating, consequently, needs to be seen as a discursive and political operation which associates reading and writing, not in search for mere equivalence but instead to produce new material and symbolic realities. Translations of the 'Chinese Web' are to be found in an exemplary device promoted on *Bloomberg Business* website in March 2013. The reader could read the following sentence before activating the so-called *Skype's Watch List*: 'These are 20 of the more than 2,000 words and phrases, compiled by computer scientist Jeffrey Knockel, that prompt Skype in China to intercept written messages. Roll over the phrases to reveal the words the hackers were targeting' (Silver 2013).

White characters are juxtaposed on a black screen and by 'rolling over' each term a small caption, at the bottom of the figurate screen, appeared to *translate* the 'sensitive terms'. This meta-semio-political device deserves to be *seen*. Each group of Chinese characters functions as a signifier of a political crisis or event ('Jasmine Revolution', 'College Students to Make Trouble', 'Diaoyu Islands' etc.). The linguistic mutation (when rolled over the Chinese terms change to English) conveys the feeling of a 'revelation' as the article promises. *Skype* is transformed into a space of contentious discussions and political involvement becomes the defining regime of everyday practices. The device forges a strong semiotic predilection and draws from the orientalizing effect of Chinese words, which refer metonymically to China as a whole in a renewed form of the *ideographic modernism* brightly described and documented by Christopher Bush (2012). This effect is even converted into a techno-orientalism when accompanied by the presence of the expert. The *computer scientist* embodies here the contemporary version of the Western moral consciousness (de Seta 2013; Lozano-Méndez 2010). The *Skype's Watch List* intends to show what is happening on the other side of the 'Firewall', hence enacting the perpetual struggle against China's censorship.

The rudimentary aspect of the black square with white words seems like an experiment. It reveals three of the major techno-semiotic logics that characterise computerised media and the issue of topographic control. Two of the dynamics I already explained are exemplified here. Firstly, the device plays with the dual character of screen scripts articulating visually their technical and semiotic strata. Secondly, this editorial composition reveals the variation of visibility conditioned by the operations of the *architext* and the *textware* in the scriptural economy.

The last dimension of computerised writing I have yet to explore is a highly dialogic one. By focusing on the obliterated words—those terms caught in the nets of the scriptural fields—the device also leads us to perceive the proper absurdity of oblitative censorship, which can and will only capture *signifiers*. This brings us back to the two contradictory epigraphs of the beginning: the infinite semiosis of Bakhtinian dialogism and the absolute reduction of signifiers in a user-generated speculative sci-fi.

Heterographic Practices and Reflexive Communication

There used to be a time when Chinese netizens invented new words or slang as part of a constant effort to keep ahead of government censors. But the latter, particularly over recent months, seem to be winning, expanding the zone of forbidden speech and driving the noncompliant further into the shadows. Perhaps it was inevitable that a new word would emerge that simply meant nothing at all. (Allen-Ebrahimian 2015)

These are the last disenchanted words of a contributor to *Tea Leaf Nation*, an influential blog covering Chinese new media trends and topics. The extract describes the emergence a word called ‘*duang*’ that spread ‘like wildfire throughout China’s active Internet after ‘fake advertisement [for herbal shampoo] remixed actual footage of [Jackie] Chan with a voice-over, ‘describing the sound reverberating from his flowing tresses’.

The statement ‘a word would emerge that simply meant nothing at all’ radicalizes the political determinism that characterised years of analysis of the Chinese Internet. The over-interpretation of the contentious character of media practices now abdicates in front of the apparent senselessness of *trivial* media objects. The ambivalence of these terms, their ‘polysemic availability’, as Peytard argues, challenges the political assumption surrounding media practices, while reinforcing at the same time the power of the constraining forces (Peytard 1993). The techno-semiotic conditions of the new scriptural economy produce ‘alternative’ forms at the intersection of industrializing regulations and appropriating practices of media users. Their discontinuous process of transformation is commented, indexed, translated, and assigned with specific functions by the devices and the meta-textualities; in a word: they are stabilized. Profoundly influenced by Bakhtin, Jean Peytard suggests that unstable, ambiguous, and problematic interpretation is not an exceptional mode of *semiosis* but its essential dynamic (Peytard 1993). When faced with the impossibility of finding an interpretative *telos* to a changing form, the commentator resorts to the ‘absurdity’ of the term. To overcome this tension between a political determinism and communicational nihilism, I would like to present an alternative dialogic category, the only way to account for the techno-semiotic variations and social alterations at play in the scriptural economy of computerised media.

Bakhtin’s notion of *heterology*, as taken up and modified by Todorov (1981), refers to the expansion of the dialogic principle to language itself, beyond the boundaries of literary analysis. In an equally expanded semiotic conception, *heterology* implies that all utterances are anticipated by previous discourse, as well as preceded by future utterances. There ‘is neither a first nor a last word’ in the dialogic context. By virtue of the intricate relation between meaning and context, *heterology* (*raznorechie*) refers to the coexistence within a language of a diversity of discourses. Producing an utterance necessarily means to appropriate discourse in relation to others.

In order to get closer to the scripturality of computerised writing, we need to alter the suffix *-logy* and invest the category with a scriptural conception of communication: this is achieved by the term *heterography*. It

allows us to avoid the reductionist, deterministic and transitive approach of sensitive forms and their mutational modes. Any type of scriptural activity necessarily confronts itself to the alterity of an *architext* and to the various semiotic regimes of the *textware*, on and beyond the screen. Heterographic practices never escape the field of the scriptural economy and yet as Certeau says, they always *deal with* the multiplicity of coercive forces. Variability and mutability are the major semiotic dynamics of heterographic practices, which might not necessarily be in search of political dissent through technical circumvention.

Techno-semiotic variations, because of their dialogic character, always challenge the process of signification. The diversity of discursive forms and media artefacts resulting from the so-called 'sensitive' context exemplifies another Bakhtinian intuition, which Jeanneret mentions in a commentary of Paolo Fabbri's 'semiotic provocations': the notion of 'specific mutability': 'The element that characterises the linguistic form as a sign doesn't lie with its identity as a signal, but lies instead with its specific mutability: [...] to perceive the orientation given to a word by a certain context and a specific situation, an orientation toward evolution not toward immobilism' (Bakhtin 1977 in Fabbri and Jeanneret 2005). In other words, heterographs challenge the instrumental rationality of the media devices that condition their very existence. Jeanneret proceeds to evoke the role attributed to semiotic analysis by Fabbri: 'anthropological and semiotic approaches should not attempt to study codes and signs, but instead should investigate the systems and the processes of signification that characterize cultures by (re)producing their subjects, objects, practices and passions' (Fabbri 2002; Jeanneret 2006). The new scriptural economy condenses various regimes of communication within the same techno-semiotically ruled spaces. Signs are maximized in their potential variability. And finally, interpretation and gestures are superposed. In order to avoid turning all computer-mediated practices into a 'semiotic guerilla-war', one needs to always remind (and attempt to analyse thoroughly) the techno-semiotic properties of computerised media.

Conclusion

By adopting a techno-semiotic perspective we aimed to emphasize the need for a shift in our apprehension of Web censorship from a strictly oblitative orientation of control to a topographic understanding of surveillance. In this context, Jeanneret's productive reconceptualization of Michel de Certeau's *scriptural economy* proved useful to envision a more pluralized reality in the coercive forces formatting, collecting, and capturing ordinary practices within computerised media. Our reflection has evolved along three thematic moments: the scriptural *reading* of a sophisticated *surveillance*, the description of *micro-media* in a scriptural era, and the exploration of *heterographic practices* at hands with the scriptural forces. A greater consideration for the political operativity of computerised writing is essential to display the ambivalent construction of media devices in China. By highlighting the depth of what is commonly referred to—in a levelling metaphor—as 'platforms', one makes clear that governmental strategies are materially dependent on the techno-semiotic properties of 'digital media'. Such conclusions suggest an alternative conception of power, which avoids the pitfalls of the binary oppositions that largely dominate 'Chinese Internet Research'. Finally, they may open the way to non-teleological conceptions of semiosis and correlatively to non-instrumental understandings of media. In that sense, the thematic notion of 'sensitivity' allows to delineate three major contributions of the techno-semiotic study of computerised media, within and beyond the admittedly specific context of the 'Chinese Internet':

(a) *Instrumented visibility or the fabrication of data as 'traces'*

The popular notions of 'sensitivity' and 'sensitive words' can be read as a local and epistemological problematization of how computerised media affect the realm of semiosis. As argued in the first section, computerised writing—or screen scripts—combine a technical level of computer coding with semiotic

phenomena on the screen. This dual character renders possible the variable ‘visibility’ of texts. The semiotic definition of ‘web sensitivity’ can be read as the uncertain possibility for mediated forms to enter (or exit) the ‘domain of the visible’. More than just a discursive property of the ‘content’, as it is usually perceived to be, it is the ruling principle of computerised writing to regulate this ‘sensitivity’. Additionally, more than simply describing the encounter of China’s governmental forces with the ‘creative practices of the netizens’, the category also serves to illustrate a major semiotic process of computerised media devices: the fabrication of computer *data* into *traces* of social activities.

Concluding her study on the cognitive and political properties of digital textualities, Estrella Rojas explains how ‘numerical thinking is a rationality arising from computing technology that generates and inflects symbolic configurations’. Implicitly referring to Ivan Illich (1991), she argues that ‘[g]oing from *visible* to *invisible*, value moves from the text itself to (1) the processes that manufacture and present it as well as instrument its reading, and (2) the upstream processes of data management and computational manipulation’. This procedure of ‘invisibilization’ signifies and reveals concomitantly what Jeanneret calls the ‘increasing integration of the usage at the very core of the scriptura economy’ (443). In spite of their regional differences and their competing economic ambitions national media industries all develop their media devices in order to derive economic growth from the fabrication of social visibility.

(b) *Instrumentalizing trivial (micro-)practices*

This configuration of ‘visibility’ is also at the core of the global political economy of computerised media. The shaping of user activities into a diversified range of ‘social traces’ relies on the possibility to semiotically convert computerised inscriptions into visible and actionable writings (e.g. *followers, fans, repost, comments, likes, views*). ‘[T]races’, argues Jeanneret, ‘correspond in fact to strata of codes whose visibility is variable, communication status is altered, and place is modulated between the pole of the computer commands and that of the social interactions’ (2014: 397). ‘Sensitivity’, in this second dimension, conveys the uncertainty of governmental reason in learning how to *deal with* the ‘traces’ of those users who themselves *deal with* the media’s injunctions to write. Therefore, it becomes more vital than ever to articulate the understanding of the techno-semiotic properties of media devices with the consubstantial technological imaginaries, the ‘communicational pretensions’, as Jeanneret calls them, of media corporations and other social agents involved in the mobilization of the micro-practices. Hence, the techno-semiotic analysis can develop into a semio-political critique.

(c) *Industrialising reflexive communication*

Finally, ‘sensitivity’ epitomizes the dialectical tension between strategy and tactics within the scriptural economy of computerised media. ‘Sensitive forms’ are also trans-forming objects, and where meaning has been ascribed, meaning can be withdrawn and displaced. This specific ‘mutability of signs’, characteristic of what we called heterographic practices, reveals the reflexivity of mediated communication on the Web as an eminently semiotic and social activity. The scriptural economy, however, nourishes itself from the proliferation of the everyday practices it conditions and fosters. Their textual creativity is the very resource of its functioning. With this *modus operandi* of computerised media in mind, I conclude with a last prospective line of exploration: the necessary combination of a techno-semiotic analysis of media prescriptions with the close ethnographic observation of how social practices poetically appropriate and *deal with* the devices in materially situated and individually experienced contexts.

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Conference Report

Tradition and Innovation – the Cornerstones of Modern Semiotics

Reni Iankova



Semiotics is often seen as an old science, a part of philosophy, linguistics or cultural studies, but in September 2014 its new, modern face was shown during the XII World Congress of the International Association for Semiotic Studies (IASS/AIS, www.iass-ais.org) held in Sofia, Bulgaria. Even the title of the congress – 'New Semiotics. Between Tradition and Innovation' – was indicative of the ongoing changes in that large and varied field. 'Innovation', in particular, was not simply the main theme explored by the participants but the hallmark itself of the organization of the Congress.

For the first time in 2014 the Congress started with broad discussions in the social media like Facebook, Twitter, Google+ where all the suggestions for round tables and papers were placed. That enabled the participants to select the session topics and facilitators they found more congenial to their interests. This new approach to Congress communication provided also an opportunity to highlight the profile of the new semiotics – that which takes place everyday on different geographical and institutional sites but which needs to be strengthened today, through closer collaboration and systematic synergies, through a new strategy that affirms the importance of the semiotic disciplinary field both in the new academic realities and outside the university, in the labour market and the market of research services. The new semiotics holds the promise of a global, project-oriented science, which will be more focused on its contribution to the human endeavour within the flexible boundaries of interdisciplinarity.

The Congress' program included many of the most interesting and well developed semiotic fields. It was divided in few main sections with more than ten round tables in each. As usual, the most important division in the program was between theoretical and applied semiotics. In the first section were included round tables devoted to the areas of visual semiotics, cognitive semiotics, cultural semiotics, textual semiotics, existential semiotics, biosemiotics, ecosemiotics, edusemiotics and semiotics of space. Participants from more than sixty countries took part in these round tables with papers and discussions. The Congress traced the rising interest in the field of edusemiotics which is seen as a new approach and instrument for improving the educational process and gaining deeper understanding of the needs of the new generations.

The applied semiotics section also attracted a large number of participants, with contributions in the following major research areas: semiotics of law, semiotics of translation, semiotics of literature, cinema and theater, semiotics of mass/new media, semiotics of video games/Internet, semiotics of music, semiotics of architecture, semiotics of religion, marketing semiotics, sociosemiotics, urban semiotics, fashion semiotics, consumer culture and semiotics. In this wide range of research orientations, it was noticeable the vivid interest

shown in marketing semiotics and the related topics of brand research, advertising semiotics and market research. In fact, during the Congress there were round tables in marketing semiotics in both English and Spanish with more than twenty participants each. The Congress papers and discussions confirmed the importance of marketing semiotics in achieving a better understanding of the consumers' needs and highlighted the value of applied semiotics in the contemporary business world.

Keeping a time-honored tradition, the Congress program had a special place for some of the most prominent and esteemed semioticians. The usual format of the plenary lectures was substituted by an innovative form of presentations, grouped under the 'Semiotics and its Masters' series of lectures. More than 25 speakers were invited to take part in the series, delivering lectures on the most crucial problems of contemporary semiotics. Among them Gunther Kress, Jacques Fontanille, Göran Sonesson, John Deely, Paul Copley, Jesper Hoffmeyer, José Enrique Finol, Patrizia Violi, Eero Tarasti, Ugo Volli, Kalevi Kull etc. Some of the topics they covered were 'What the humanities are for – a semiotic perspective', 'Semiotics as a Metalanguage for Science', 'Semiosis and Human Understanding', 'Forms of living and the semiotics of culture', 'On the Corposphere: body, eroticism and pornography', 'Semiotic individuation. From amoebae to humans', 'A sketch of a Social Semiotics: questions and directions', 'The Invention of the Text', 'Semiotics as Critical Discourse', 'Ways of Understanding. Semiotics and Hermeneutics'.

The Congress had the privilege to have two eminent figures of semiotics as honorary guest speakers – Jaakko Hintikka and Solomon Marcus. Their lectures took place on the mornings of 17th and 18th of September, in Bulgaria Hall, in the center of Sofia. The topics of their lectures were 'Language Games as a Focal Concept of Language Theory' and 'Hidden Signs: The Literary Face of the Non-Literary Texts'. The lectures were open not only for the Congress' participants but also for journalists and not specialized audience.

For those not acquainted with the institutional background of the Congress it's worth mentioning that the International Association for Semiotic Studies (Association Internationale de Sémiotique) was established in 1969 and the founding members include distinguished semioticians like Algirdas Julien Greimas, Roman Jakobson, Julia Kristeva, Emile Benveniste, André Martinet, Roland Barthes, Umberto Eco, Thomas A. Sebeok, and Juri Lotman. Today the IASS/AIS has about 500 individual members in 83 countries, and about 1000 followers if we count the people from the Collective Members (international and multinational associations dealing with the semiotics of particular topics, national semiotic associations, regional groups, research centers, research groups, circles, university institutes). In 2014 co-organizer and host of the Congress was New Bulgarian University (NBU, www.nbu.bg) – the biggest private university in Bulgaria, founded in 1991 by a mandate of the Parliament, also the university which introduced and continues to be the seat of major innovations in Bulgarian academia. More specifically, the organizer of the Congress was the Southeast European Center for Semiotic Studies (SECSS), which organizes the famous Early Fall School of Semiotics since 1995. The close collaboration between SECSS, IASS/AIS and the New Bulgarian University ensured a hugely successful event, which attracted more than 500 registered participants from 61 countries, comprising both established semioticians and young semiotics scholars.

During the Congress there were elections for the President and the Bureau of the IASS. Prof. Paul Copley from Middlesex University (London), has been elected as IASS's new President until 2019, while the former President Prof. Eero Tarasti was elected for his merits as a honorary president. With its new leadership IASS/AIS is about to take a new course, aimed to take up the social, cultural and academic challenges of twentieth-first century. Among the most important commitments that the newly elected President of IASS Prof. Copley made, are:

- raising the profile of the IASS and semiotics;
- encouraging collaborations between geographical regions where there is a strong tradition in semiotics and other regions (for example, East Asia, South America, Africa);

- setting up an IASS postgraduate network in semiotics, to share practice and support among early career researchers in the field and to monitor job prospects for young scholars;
- setting up an archive devoted to the IASS and an Open Access repository for members' publications.

At a time of great changes and challenges for the institution of the University, for the humanities as an area of study and research, but also for culture as a whole, 'New Semiotics: between Tradition and Innovation' achieved its two main aims: to provide a forum for the presentation of cutting-edge international semiotic research; and to demonstrate to the global community the central role that semiotics will continue to play in the analysis of life in contemporary societies.

Reni Iankova, Southeast European Center for Semiotic Studies, New Bulgarian University

Punctum is a blind peer-reviewed, on-line journal dedicated to the semiotic study of contemporary cultural texts, practices and processes. Aspiring to provide a venue for the advancement of international semiotic scholarship, the journal is published twice a year (July & December), in English, although submissions in French and German will be accepted as well. Published under the auspices of the *Hellenic Semiotic Society*,

Punctum's Editorial Board reflects both its international scope and the diversity of contemporary semiotic research and theory. *Punctum* invites submissions (original papers, review articles, book reviews, conference reports) across this wide range of semiotic fields and methodologies on an on-going basis, and regularly it will put out a call for a special issue with guest editors.

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