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VISUAL LITERACY AND SEMIOCOGNITIVE CONSTRUCTS : A SENSE-MAKING STUDY OF VIEWER'S EXPERIENCE

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We are bombarded everyday with visual images of all shapes and sizes. It would be short-sighted to consider these images as devoid of norms and values given the cost of creating them and their increasing ubiquity. How then can these images influence viewers' semiocognitive constructs? What are the literacy skills involved in making sense of these visual experiences?

In response to these questions, Jeanneret (2008: 193-201) outlines three cultural topologies regarding the social circulation of mediated "intelligences and truths". First, there are the cultural Have's and Have-not's where recipients at the lower end of a cultural hierarchy receive a purported "impure" culture. The second cultural topology promotes the virtues of a barrierless access to culture by advocating peer-to-peer, horizontal exchanges that unite cultural resources and decry that which casts them asunder. The third mediated topology is described as a "cafeteria" where users seize cultural artefacts put within their reach. To do this, artefacts are placed at the "same level" for maximum accessibility and proximity. In each of the three cases different sociotechnical norms govern mediated resources and user responses. What each cultural topology values as important differs; whether it be the vertically hierarchical notion of cultural "transmission" from the Have's to the Have-nots, the horizontal peer-to-peer sharing or the self-service "cafeteria" approach to media creation and usage. In this sense, it can be said that Information and Communication Technology (ICT) conveys sociotechnical "norms" (prescribed and proscribed conventions and expectations that guide an individual's "actions", in the broad sense of the term, in a given situation) and "values" (that which can be considered as worthwhile in terms of time, effort or ethical principles) as cultural artefacts embedded in a "communicational framework" (see below).

With this is mind we present 20 case studies that examine how the sense making process of film viewers can lead to semiocognitive constructs with reference to more or less shared cultural norms and cinematographic codes from an Information and Communication Sciences (ISC) perspective. The case studies are presented in four parts, starting with the conceptual framework of the study, followed by its research objectives. The grounding having been set, the research method and the results are then presented.

CONCEPTUAL FRAMEWORK

Our study rests on certain key terms in an endeavour to identify the apparent effects of a sequence from an action film linked to viewers' semiocognitive constructs. In this context, the term "semiocognitive construct" is considered as an emerging outcome stemming from a sense-making process based, in part, on apparent perceived "affordances" i.e. semiotic elements that attract attention where global "meaning is observed before the substance and surface, the color and form are seen as such" (Gibson, 1979: 134). Such affordances are seen as offering opportunities for use in a given situation (Gibson's 1979: 139). From an ICS perspective, a key facet of a holistically perceived affordance can be found, in part, in its ostension (from the Latin, "to show") i.e. the way in which a configuration of phenomena can suggest an apparent "offer of metacommunication and communicational intent" (Jeanneret, 2008: 167). In this sense, semiocognitive constructs, which is hypothesised as expressions of underlying value systems, are associated to a "communicational framework that structures and affords social exchanges" (Jeanneret, 2008: 19-20). Such frameworks provide opportunities and constraints (via more or less shared norms, values, artefacts, etc.) for cultural beings to create resources and situations in their mutual interactions as sense-makers.

The idea of visual literacy, when viewing a film as a culturally mediated artefact, refers to learned cultural skills which accept that "one form of sense making does not override others" given that visual images are inherently polysemic (Note 2011: 1-2). In this vein, Bamford (2003: 1) describes visual literacy as a self-critical "ability to construct meaning from visual images" in the interpretation of content, examination of social and ideological implications of visual images, understanding of purpose, audience and ownership and judgment of the accuracy, validity and worth of what is experienced. This understanding of visual literacy corresponds to the writings of those in Visual Studies, such as Mitchell (1986: 2) for whom imagery serves as a kind of "relay connecting theories of art, language, and the mind with conceptions of social, cultural, and political values".

Based on the concepts of visual literacy, semiocognitive constructs and communicational framework, the study seeks to understand the dynamics between scenic elements of a film and viewers' sense-making processes that can create, what Jeanneret (2008: 159) calls, a "media-text", i.e. the relationship between what can be expected from a mediated artefact and how an individual makes sense of them. But, where do media-texts spring from? An answer to this question lies in the informational nature of the "semiotic experience of events" (Lamizet, 2006: 60, 271). The author defines such events as "unexpected facts, or at the very least a fact non-conform to the facts that preceded it" that intrigue, worry and pry open an individual's sense of identity (Lamizet, 2006: 26). From an ICS perspective, the question arises about the "informational" nature of these events. In this context, Floridi's (2010: 20-21) concept of "General Definition of Information" (GDI) sheds light on the informational nature of a visual experience. To do this, Floridi posits "data" as the basic building brick of the phenomenon of "information". These data are defined as "fractures in the continuum or lacks of uniformity in the fabric" of reality, which can be inferred

empirically from experience (Floridi 2010: 23, 69). (This "fracture in the continuum" resonates with Lamizet's idea of "a fact non-conform to the facts that preceded it"). Given this Floridi (2010: 20-21) argues that a GDI is made up of well-formed (in terms of syntaxical norms), meaningful (interpretable within the norms of a discourse community) data ("stuff that can be manipulated", Floridi, 2010: 20). How then can a GDI help understand the sense-making process of a media-text? We argue here that Kelly's (1963: 120) triadic repertory grid methodology is one way of documenting a viewer's "media-text" in terms of a GDI approach. Within this framework, the main claim of the paper is that the emergence of semiocognitive constructs via a repertory grid (cf. Labour 2010: 83-86) - as a formal expression of an individual's media-text - marshals key concepts found in Jeanneret (2010), Lamizet (2006) and Floridi (2010) in a sufficiently coherent way when seeking to grasp a viewer's visual experience. In this situation, the viewer is seen as a "condensed product" of a broader social process (Lahire, 2006: 17).

RESEARCH OBJECTIVES

Steinar Kvale (1996: 183) points out that interviewee's statements are not like "gathering small stones off a beach" but coauthored with an interviewer. In this sense, the idea of an "interview effect" implies that a communicational framework exists with norms that govern, for example, pragmatic discourse skills such as in speaking/listening turn taking, verbal gaps, overlaps, hedging and discourse markers to avoid conversational breakdown. Added to this, in this study, interviewees knew they would be involved in an academic research project where they would be speaking to an interviewer who had been their lecturer four months before (but in a domain that had nothing to do with the research at hand). These factors could result in the Hawthorne effect, whereby a researcher's attention to people being observed directly modifies their responses. In short, a research situation purveys social norms and values, which could influence the replies of interviewees. It was for these reasons that the first research objective zeroed in on the apparent effects of a communicational framework that allowed spectators to watch a four-minute car chase sequence taken from an action film. This led to the creation of Research Objective #1 if a research interview process is seen as a communicational framework – which structures and facilitates (with its attendant norms and values) social exchanges – what are its apparent effects on viewers' responses?

The study into possible "interview effects" goes beyond a methodological preoccupation about research techniques. It is hypothesized that these effects can also be explained in how viewers make sense of a filmed car chase through a "crowded European city centre" in terms of how semiocognitive constructs portray cinematographic "codes" (rules that decipher a set of signs e.g. hairstyles, dress code) and stereotypes (a form of categorisation based on identifying similarities, and underplaying differences, among a given set of entities e.g. of "CIA agents" in film fiction in terms of other entities e.g. "criminals" in film fiction) vis-à-vis societal norms about driving on public roads, the role of the police in society and whether action-films encourage (or not) anti-social behaviour. This sense-making process draws on an individual's visual literacy skills in "deciphering actions, objects, and symbols experienced in the environment and enjoying achievements of visual expression" (Note, 2011: 1). This gave rise to Research Objective #2 - what do viewers' verbalized semiocognitive constructs (about an action film) tell us about how they appear to make sense of cinematographic codes and cultural norms? To do this, viewers' responses about their audiovisual experience were construed as media-texts in a situation where they were free to enjoy the experience as they wished. This type of experience is, however, not as "free" (in the sense of "arbitrary") as it may first appear. From an ICS point of view, such audiovisual experiences are associated with cultural norms and values of what can be considered as an acceptable "entertaining" action-film. These norms form part of what affords "individual access to cultural choices embedded in the logistic dimension of a mediated artefact" (Jeanneret, 2008: 193).

RESEARCH METHOD

Of Jeanneret's (2008: 193-201) three cultural topologies (see above) our study leans towards the self-service, "cafeteria" norms and values that place mediated artefacts within easy reach of viewers. In this case, viewers watched a four-minute car chase taken from the action film, Vantage Point (2008), which the viewers had never seen. The sequence shows a man in a black suit, frantically driving a small blue car behind a police car with sirens blaring and careering through a jam-packed city centre with its two occupants dressed in police uniforms shooting at the blue car behind them. The car chase was screened on a 17-inch computer screen that was placed on an office desk in front of a comfortable chair. The sequence was viewed individually by each viewer in the interviewer's office. The same interviewer conducted all the interviews, which were tape recorded and lasted about 60 minutes.

Following a study conducted using a similar research method about how air traffic controllers interpret data from their radar screens (Labour, 2010), a new pilot study concerning potential film viewers revealed that they identified the pursuer as the "good guy" and the two pursued men as the "bad guys". After the pilot study, 20 adults were interviewed about what sense they made of the car chase. Before watching the sequence, the broad objectives of the study were explained to the viewer, following this, the person filled in an informed consent form and a close-ended questionnaire about leisure and driving preferences (Questionnaire #1). The instruction to the viewers was: "Please watch the film and tell me what you think about it as if you were talking to an acquaintance who wanted to know if it was worthwhile watching". The viewer then saw the car chase and immediately afterwards filled in Questionnaire #2, about if s/he wanted to see the whole the film and what the car chase meant to the person. This served as a launching pad for a semi-guided interview.

A number of data sets emerged from the interview situation. Apart from the responses of questionnaires #1 and #2, there was also verbatim data from the interviews based on Dervin's (1999) qualitative sense-making approach in conjunction with Kelly's (1963) analytical, and partly quantitative, triadic repertory grid methodology (cf. Atherton, 2011). In terms of conversational analysis norms, the role of the interviewer was that of a non-confrontational active listener (for a more detailed description see Labour, 2011).

1	Pursuer	Pursued	Passer-bys	5
(similitude attributes)				(dissimilitude attributes)
Motorised	1	1	5	On foot
Police	1	2	4	Open minded
Sadness	1	2	4	Colourful
Blatant visibility	1	2	5	Obscure mass
Close up shot	1	1	5	Panoramique shot
"Buckled" vehicles	1	3	4	Mellow
Faces	1	1	5	Anonymous forms
Sign of recognition	2	1	5	Anonymous clothing
Enclosed victims	1	4	4	Alive
Law abiding	2	5	3	Law breaking

Table 1. Example of a viewer's responses documented in a triadic repertory grid

The progressively constructed grid allows interviewees to succinctly crystallise their points of view by putting forward similitude-dissimilitude dyadic attributes (see Table 1 above). This is followed by the viewer selecting a numerical preference on a five-point ordinal scale. In using the grid in a media-text building process, each chosen item has a unique and personal sense for the person. The coupling of viewers' verbalised attributes to a numeric preference scale, commented on by the person, represents an effective operational mode for Floridi's (2010) General Definition of Information based on "well-formed, meaningful data". The grey elements of Table 1 (above) indicate viewers' declared preference after having crystallized their point of view via different verbalised dyadic (similitude-dissimilitude) attributes established by comparing the sense accorded to the Pursuer, Pursued and Passer-bys (for a more detailed explanation see Labour, 2011). This filling in of the grid acts as a form of "rewriting" (Jeanneret 2008: 87-88) that identifies the scenic affordances of the film and documents the outcome of the interview. According to Jeanneret (2008: 72) this rewriting socialises an interpretation of a text, allows the text to migrate from one social context to another and makes it easier to handle when becoming part of other cultural entities. A semiocognitive analysis of the responses in the repertory grid permitted the extrapolation of an individual's value system, notably through their declared preferences (in grey). Finally, Questionnaire #3 came near the end of the interview to see if after talking about the film, the spectator (still) wanted to watch the film in its entirety, or not. This last question was then compared to the previous response given in Questionnaire #2.

The data coding and analysis took into account the communicational framework of the interview by confronting bottom-up analytical field data with the top-down research framework. This led to building "interpretative analytic" categories (Paillé & Mucchielli 2008: 248, 271-273) by identifying interrelationships between apparent data regularity and irregularity in the way viewers' made sense of perceived "events" during the car chase in terms of cinematographic (and societal) norms and values. In more operational terms, this involved looking for unifying elements that appear to link up a number of disjointed data. What is important here, is the qualitative coherence of an interrelationship of data. It is in using such a qualitative approach that the analytical approaches of Floridi (2010) and Kelly (1963) can dovetail with the more global frameworks of Jeanneret (2010), Lamizet (2006) and Dervin (1999).

RESULTS

Research Objective #1 focused on the apparent normative effects of a research "communicational framework". In terms of this, there appear to be three different effects that could be, in part, attributed to a communicational framework where viewers can verbalise their visual experience.

Firstly, the results of the study indicate that for many viewers, the conditions that allowed the viewing of the car chase and the exchanges with the interviewer appeared to have a stabilizing effect, i.e. it reaffirmed their initial decision about the film. What transpires from the interpretation of the data is that the verbalizing process clarifies and structures the initial visual experiences of viewers.

Secondly, the interview situation seems to have amplified viewers' initial (negative or positive) decisions about the car chase. One group of viewers expressed an increased desire not to see the film. The exchanges during the interview made them relive uncomfortable emotional experiences or reminded them of their indignation when watching the film. The interview situation appeared to have created dissonant semiocognitive constructs akin to what film specialist Frank Manchel (1990: 543) calls, a boomerang effect against what was experienced. The studies following Festinger (1957: 14) define cognitive dissonance as arising when a person is confronted with stressful and unresolved conflicting cultural norms and values from past experiences, internal inconsistencies in the person's thinking process or a conflict between what the person does in public and in what s/he privately believes.

Thirdly, for another group of viewers, reliving the audiovisual event enhanced their wish to see the film in its entirety. Some explained they wanted to increase the dramatic thrills they felt due to the stunts they saw in the car chase (special effects factor). Others said that in spite of the "dangerous car chase" they still wanted to see the film in order to find out what happened to the main characters of the film (scenario factor). In both cases, we named this the propellant effect.

Other explanations can be found to interpret the data by taking a visual literacy angle. It was in this context that Research Objective #2 examined the sense making elements that influenced viewers' decision to see the film in its entirety. The data shows that for the same decision to see the film, or not, viewers offered contrary value judgements. Inversely, similar value judgments among viewers gave rise to different decisions about the film. These summary results underline the complexity of semiocognitive constructs and the need, for example, to identify the affordances that attracted the attention of viewers. In this case, it turns out that viewers focussed on the hero-pursuer and the anonymous passer-bys in the background. The relationship between these two characters appears to act as viewers' sense making soundboard.

The unconditional fans of the car chase were fascinated by the driving stunts, speculated on the make of cars used in the scene and wondered if cars would be able to withstand the stunts in off-screen life, especially in a busy city centre. Clearly, for them the car chase was mind relaxing entertainment to "chill out" after a hard day's work. When asked about how they felt about watching an action film on a computer screen, the fans said they effectively watched action films in this way when they were by themselves. That said, they preferred to go to the cinema to see this type of film for the quadraphonic sound and to share the event with friends. In short, the enjoyment of a film does not just depend on the technical quality of the film or the intrinsic excellence of the actors, but also on the social viewing environment. This in itself may not be new, but it does show how the research method pinpointed important details about viewers' audiovisual experiences.

The results also show how these viewers picked out sense making details such as the make and age of the cars used in the scene, the fact that the pursuer was probably the "good guy" because of his "secret agent" earpiece, his "James Bond" like hairstyle and stylish black suit. Some spotted a micro-sequence of an American-flag lapel pin on the pursuer's suit. This led the fans of the action film to correctly conclude that the pursuer was a CIA operative. For one fan, the lapel pin was interpreted as a "Sheriff's badge" and a metallic wrist chain bracelet, worn by one of the men dressed as police officers, as "handcuffs". According to these viewers, the two pursued men, dressed as police officers and driving a police car, were the "bad guys" because they had severe short back and sides haircuts like the "swarthy criminals and convicts" one sees in television series, such as Prison Break (2009). The fact that the pursuers broke traffic laws and shot at the blue car behind them confirmed the idea that they were the "baddies" in a fictional film. What made the car chase "fictional" was the fact that the norms and values of "real life" did not apply to the film, which was described as "harmless escapist fun, nothing to do with reality". Some were convinced that the car chase was, in fact, a television advertisement vaunting the robust features of a make of car. However, this "spills and thrills" level of visual literacy went further for some viewers.

One viewer, aficionado of car shows and action films, theorised about two types of cinematographic car chases. First, there are car chases like in the film Bullitt (1968) that are like "Formula 1" cars on a racetrack. The challenge is mainly to keep control of a car at top speed on a relatively "open" road. Then, there are car chases, like the one he had just seen, which are more like "car rallies" where the challenge is in dodging obstacles, such as passer-bys, tables and chairs and oncoming traffic, especially for the pursuer, who cannot really choose his route. The fan's personal preference was for the "car rally" because it is less predictable. Another person explained that while he wanted to see the film, he would feel guilty about admitting this to someone who had been involved in a car crash in some way. In this more reflective account of the car chase, the passer-bys were implicitly part of the individual's semiocognitive constructs, albeit as secondary elements of the backdrop or as a sort of taboo. This contrasts sharply with more critical viewers who felt there was an inevitable relationship between "on-screen" and "off-screen" lives.

Many viewers were indignant at seeing the "callous way" in which the protagonists of the car chase treated passer-bys. They described the film as showing how some police officers behave as if they were above the law to blithely ignore traffic laws and irresponsibly endanger the lives of ordinary citizens going about their everyday lives. To back up their argument, some viewers pointed out that at least one woman was injured by the car chase and this should not have been shown in an action film. Other viewers, who did not mention the micro-scene of the injured woman, critised the film for not showing how car chases can have disastrous effects on human life. Had this been done, it would serve as a warning to would-be copycats in off-screen life. This, they felt was important in a "fast-moving, individualist society" where people bypass the laws they wish. In this sense, the car chase symbolises how "police officers" (in fact only the pursuer was a "real" police officer) think they are free to break certain laws in order to stop others breaking the law. These critics of the car chase described what they saw as hackneyed but hyper-

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realist. In effect, some viewers explained that watching a high speed car chase is best done on a "big screen where the zoom is less intense" and this lessens a sense of "visual violence". They ended their comments with the recommendation that "fragile adults" and adolescents should not watch this type of film in case they think that what they see on-screen can be easily done off-screen.

At the end of the interview, the viewers were asked to choose with which character they identified the most in the car chase. Nearly half of the viewers chose the passers-bys. This was a little surprising given that many viewers found it more difficult to talk about the passer-bys compared to the "James Bond" style pursuer and the two "swarthy criminal-looking" pursued men. It seems that the preferences for the passer-bys were largely based on emotions of indignation or grudgingly admitted excitement felt during the car chase. This suggests that even if the ostention of passer-bys appears to be secondary, for many viewers they serve as a sense-making soundboard. As secondary as passer-bys may seem to be in the car chase, they nevertheless act as a reference point in creating a semiocognitive depth of field of perceived events. This is a significant element when understanding how viewers make sense of their audiovisual experiences. Those that preferred the hero-pursuer explained their choice by a more "rational" criterion of wanting to side with the legitimate representative of the law.

These results show how viewers' identify cultural norms (e.g. respect of passer-bys) and cinematographic codes (e.g. hairstyles) and what social and educational value they accord to them. In this sense, on-screen violence was not seen as "morally neutral" by those who felt there is an inevitable bleed-through effect between on- and off-screen realities.

CONCLUSION

This paper examined two research objectives. The first objective had a methodological slant to establish the extent of discernible communicational effects on the semiocognitive constructs of 20 people who viewed a high speed "cops and robbers" car chase. It turns out that the more or less shared norms and values of the interview situation gave rise to the boomerang, stabilisation and propulsion effects. The second objective focused on the way viewer's made sense of cinematographic norms and codes. The data showed that viewer's media-text, inferred from a constructed, information-driven repertory grid, identified a sense-making soundboard in the relationship between the designated hero of the film and the passer-bys in the background.

Two forms of visual literacy can be inferred from viewers' responses. A first group separated the life threatening, law-breaking behaviours on-screen life from the norms of off-screen life. A second group highlighted the inevitable bleed-through effects between on-screen and off-screen lives. This group recognised, often grudgingly, the undeniable emotional thrills of action films.

Amongst the limits of this study, there is the issue of conducting interviews with "similar" types of viewers. In this case, the viewers were adults reading for a third year Bachelor's degree course who had a relatively articulate and developed sense of visual literacy. It would be interesting to look at how less schooled viewers and those from diverse cultural backgrounds make sense of their audiovisual experience from an ICS and visual literacy angle. This could be done by examining the operational implications and pragmatic effects between a "General Definition of Information" (Floridi, 2010) and the idea of "media-text" (Jeanneret, 2008). One way of doing this is through research methodologies, such as that of Betrand Lahire (2006: 696) who considers how apparent "resemblances and dissemblances" between and within individuals can influence the use, or the putting on "stand-by", of semi-conscious interpretative schemata (via their norms, codes and values) in the heat of action tied to a given social context.

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