METAPHORICAL MODELS, CYBERGENRES AND USER STRATEGIC MODES IN VIRTUAL SPACE[1]

Carolina GIRÓN-GARCÍA
Ignasi NAVARRO I FERRANDO[2]

Abstract

In recent decades, new technologies have evolved so rapidly that the use of computers and the Internet has resulted in the appearance of a new type of genre, i.e. Cybergenre (Shepherd & Watters, 1998; Shepherd, Watters & Kennedy, 2004). The medium used by these new genres, their social role, their purpose, their audiences and kinds of skills required to their users differ from those of old genres, and therefore, cybergenres cannot be measured or characterized by means of the same parameters as traditional written (paper format) genres. On the other hand, some authors have described three types of "Reading Modes", such as 'Navigating', 'Browsing', and 'Reading' (Girón-García, 2013), regarding different Internet users' strategies.

Our hypothesis is that the type of reading mode –or user strategic mode- not only has to do with types of users and their tendencies but also with the cybergenre itself, its configuration and the types of cognitive frames that it activates in users. Each particular genre activates certain metaphorical models –made apparent through metaphorical expressions– that configure the necessary paths for users to succeed in its adequate processing.

In this context, our purpose here is to identify idiosyncratic metaphorical expressions that may guide the movement of the user thought texts precisely because they activate cognitive models. In turn, we provide descriptions of metaphorical models and try to explain and illustrate their coherence within particular genres. Therefore, our procedure consists firstly in selecting genres, such as on-line dictionaries and market sites, secondly identifying metaphorical expressions, and finally describing the models they activate, so that we can elucidate different user strategic modes (reading modes) for each genre type.

We claim that different guiding metaphors of topological character (spatial) prompt different users' techniques or strategies. In addition, we suggest that these metaphors provide internal coherence to the genres, as such.

Keywords: Digital literacy; Cybergenre; Idealized Cognitive Models (ICMs); Metaphor; Virtual space

1. Introduction

The purpose of this study is to provide some evidence that metaphorical models constitute a relevant part in the comprehension and production of texts, and more concretely digital texts in the World Wide Web (Navarro 2008; Navarro *etal.* 2008; Navarro & Silvestre 2009). On the one hand, our research envisages a characterization of the role of metaphorical models in digital genre configuration as different from other genres as for content organization and structure. Metaphorical conceptualization plays a role in the comprehension and production of texts as context-bound and genre-bound communicative events (Caballero 2003; Ponterotto 2000, 2005). On the other hand, Shepherd & Watters (1998: 98) emphasize the role of genre in the development of the notion of interface in the Internet. Digital reality has prompted researchers to explore users' interaction with online

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[2]Universitat Jaume I, Castelló de la Plana (Spain)

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genres (Toms & Campbell (1999: 3). In this connection, the stud y of productive and procedural mechanisms that govern interaction with online genres can be fundamental to the development and teaching of autonomous skills for language learning in hypermedia environments. In this line, we intend to show some ways in which metaphorical models bring about a cognitive guide for Internet readers to make up meaning throughout their trajectories across hypertexts (Kress 2003). Consequently, the purpose of this work consists in identifying the nature of some metaphorical Idealized Cognitive Models (ICMs) that offer coherence for the design and elaboration of websites, which in turn guides users' strategic modes. Linguistic expressions such as "home" or "visit" are not only used in our daily language, but also in digital environments that offer a medium for cybergenres. In this context, we try to disclose the connection between metaphorical models and 'digital literacies' (Girón-García 2013; Girón-García & Gaspar 2012) that allows for the reading of cybergenres to be a cognitive process whereby users construe meaning of digital texts through the mental activation of previously well entrenched cognitive models.

2. Cybergenre generation: characteristics and evolution

In this context, we intend to show how Cybergenres in the new media age can help to develop different strategic modes of facing a digital format, in other words, different user strategic modes.

The notion of genre is not new. Communication events have already been classified into categories or 'genres' that are characterized by form, topic and purpose; therefore we still need to refer to genre studies on some occasions to understand metaphorical models that occur on the Web. In addition, new technologies (ICTs) have evolved so rapidly that the use of computers and the Internet has resulted in the emergence of new genres (i.e. 'Cybergenres').

In our digital society, electronic texts adopt new characteristics. Digital texts are hypertextual, interactive, and multimodal (Luzón*et al.*, 2009). The notion of *'hypertextuality'* implies that users are able to navigate creating their own paths through information in a non-linear way that may be different from the path followed by other readers or the author's intended path. In '*interactive'* texts, readers are invited to co-author online texts as they navigate various paths and construct a personal adaptation to different types of information. Thus, texts on the Internet become interactive environments as opposed to static words on a page. Electronic texts are also '*multimodal'*, because they can integrate a range of symbols and multiple-media formats including icons, animated symbols, photographs, virtual reality environments…. Thus, images and sounds are combined with written texts to create new ways to convey meaning.

Given that genres evolve over time in response to changes and social pressures, in some cases, these changes lead to the appearance of new genres. In this work, we refer to the emergence of 'cybergenres'. Shepherd & Watters (1998) classify cybergenres into two main classes of subgenres, i.e. (i) extant and (ii) novel, according to their degree of evolution. We will try to show that novel genres incorporate the three aspects illustrated

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below (hypertextuality, interactivity and multimodality) plus further traits like hybridazation of cognitive models.

3. Genre hybridization. (W)reader or user?

In the technological medium, we are able to move from one digital environment to another. The notion of traversal is often associated with that linking process that allows for interaction between configurations of space and time. Lemke (2009) defines traversal as a mediational process that involves establishing connections across spaces.

A web page provides visual hints that allow its users to grasp its content, purpose, organization, and function. In order to use digital texts effectively, users should be able to identify the features that make them different to other kinds of documents. When we identify a genre, we activate a mental model that brings about a set of expectations and inference pathways which facilitate textual interpretation and use. Accordingly, digital genres are conceived as a meeting point for designers' and users' representations and models. Providing that we are dealing with a digital medium, hybridization of genres takes place if we compare digital to traditional generic taxonomies.

We can talk about significant changes between digital and traditional formats to access and read information. *'Wreading'* (Luzón& Ruiz-Madrid, 2008) has to do with the introduction of new abilities that are necessary in the cybergenre era. Such abilities include the user's capacity to shift from one strategic mode to another. Girón-García (2013: 144-149) describes three strategic modes, namely 'Navigating', 'Browsing', and 'Reading'. The navigating mode consists in impulsive and quick shifts across websites whereas the browsing and reading modes require more purposive behaviour. These two differ in the degree of concentration that the user puts in a particular text within the same screen so that, whereas the reading mode requires detention and intensive reading, the browsing mode allows for scanning and skipping because the user's purpose has more to do with searching than with assimilating information. Our hypothesis is that the type of reading mode -or user strategic mode (Girón-García & Navarro, 2014)- not only has to do with types of users and their tendencies, but also with the cybergenre itself, its configuration and the types of cognitive models that it activates in the users' minds.

4. Cognitive models and genre configuration: Metaphorical models in websites

The presence of different cognitive models in the same digital environment makes it possible for users to switch from one navigation mode to another (mode-switching). In addition, some digital environments demand the successive activation of different user strategic modes. In identifying a genre, the user activates a mental model that brings about a set of expectations and inference pathways which facilitate textual interpretation and use.We conceive of cybergenre as a common ground where both designers' and users' genre representations and models meet. In this line, cognitive models facilitate cybergenre variation in the Internet medium. Though the designer triggers off the use of a metaphor by means of introducing linguistic expressions as procedural vocabulary in a website, previous

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knowledge about the metaphor source domain is already shared by designers and users. On the other hand, we consider that rather than mere similarity between the structure of the interface and prior knowledge, what actually occurs is that prior knowledge is mapped onto the conceptualization of the interface structure. In Cognitive Linguistics, previous knowledge shared by a cultural community has been analysed in terms of Idealized Cognitive Models (ICMs). The nature of these underlying ICMs, may influence users' representations of various types of websites.

The metaphorical linguistic expressions that recurrently occur in websites make conceptual metaphors visible to the analyst as manifestations of such metaphors. Navarro and Silvestre (2009) analysed a set of metaphorical source domains that map onto a target domain, called "feature website" by these authors, which constitutes a new domain in the conceptual system, given its recent existence in modern culture. That domain materializes in an emergent genre, in terms of Shepherd and Watters (1998).

The ICMs mappings bring about a series of entailments for the users' understanding of the target domain –the new cybergenre– and determine the scope of the metaphors. Each source ICM contributes to our understanding of websites as discursive organizations and genres. Consequently, each ICM prompts its own inferential patterns as users attach some pre-eminence onto them in the process of using a website.

In the following, we identify metaphorical expressions and the metaphors these express. The metaphorical models that are revealed from this analysis may be considered as those conceptual elements that build coherence in the website cybergenre. Given their contribution to hypertextual coherence and architecture, these mappings are idiosyncratic of cybergenres, and presumably, they might characterize reading strategies and modes.

In our analysis, source domains that map onto the target domain "website" are made explicit. The analysis tries to show the entailments caused by the models which make it possible for users to attain a feasible understanding of the target domain. In everyday navigation, internet users are not aware of the systematic mappings between source and target domains. Conversely, knowledge of such mappings is mainly unconscious, and it is just for analytical purposes that domain maps are brought into awareness. Kövecses (2002: 6) remarks that the occurrence of metaphorical linguistic expressions reveals the existence of the conceptual metaphors, i.e. the forms of language show evidence of the existence of thinking patterns. In fact, it is rather difficult to speak about cognitive domains like websites without turning to the usual linguistic expressions –*visit, welcome, come in, home*, etc. – which constitute the overt manifestation of metaphorical models. Nevertheless, so as to understand the mappings, we need some literal meta-language that allows us to describe the literal domain. Thus, if we think of our experience of the domain "website" *literally* we visualize a designer who elaborates a software program and stores it into a computer server at a real physical location. At a distant location, a person sitting on a chair faces a computer screen. The computer may be turned on and linked to the server through telephonic connection. A pointer on the screen is connected to an electronic device called *mouse*, so that it can approach and cover a section on the screen; buttons on our device can activate

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new screens; new layouts emerge where labels, pictures or photographs, and most probably written text appear on the screen. Certain linguistic expressions are coloured or underlined. Clicks on marked expressions are used to activate further screens. Thus, apparently we interact physically with the electronic device under our hand which causes the activation of screens, and we also read text on the screen that the designer created. Actually, what will appear next on the screen if we produce a new click on a marked expression is unknown. The real makeup of the available material is hidden, and we have no physical access to it.

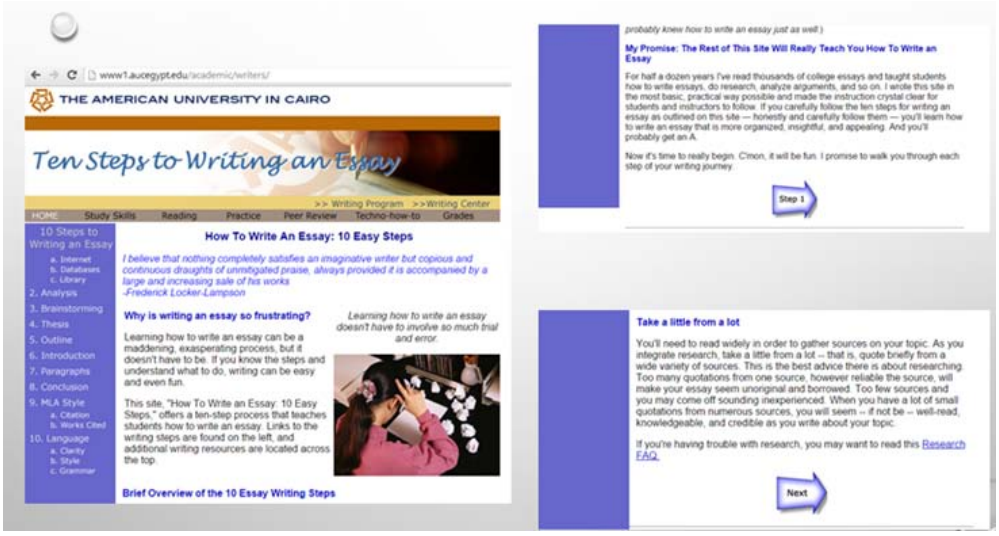
Thus, interaction with the Internet just in terms of the conceptualization and representation of actual physical motion of hands, fingers and eyes, would make it rather difficult for us to make decisions on what we want to activate and, consequently, read or visualize. Person-computer interaction would turn out to be rather weird and would most probably fail. For that reason, metaphorical models –conceptual metaphors– that provide a coherent structure for previously unknown realities are needed for a practical understanding of domains that have not been experienced previously or domains that do not allow for physical experience (virtual domains). The unknown, new, abstract or virtual domain is called Target Domain, whereas the previously known, physical or social, and well-understood one, is called Source Domain given that it provides the conceptual source for understanding the Target Domain.

In fact, our interaction with websites, our decisions as we activate screens, and our use of internet materials and resources would not be possible without those cognitive domains from previous experience. Navarro & Silvestre (2009) illustrate five source domains that map onto the virtual domain known as 'website', namely, house, site, journey, book, and net. For the present study, we will draw our attention to the 'Book Model' and 'Site Model'.

The book model activates the traditional representation and conceptualization of the reading process as associated to paper formats. Thus, websites are conceived of as *pages* that users may *browse* through. The initial page is accessed before the *next page* and once the user has accessed several pages there is the option to go *back toprevious pages*. An *index* and a *contentstable* may be found, and a user's option is to *bookmark* an interesting page. If the user activates the 'Book Model', particular kinds of interaction decisions are more likely.

Along this line, the websites http://www1.aucegypt.edu/academic/writers/ (Ten Steps to Writing an Essay) (Figure 1) and https://en.wikipedia.org/wiki/Main_Page (Wikipedia) consist of pages that users may browse through and read. One can go from one page to the next page, and back to previous pages. There is an index and a contents table, and we can bookmark an interesting page.

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(Figure 1: 'Ten Steps to Writing an Essay' website)

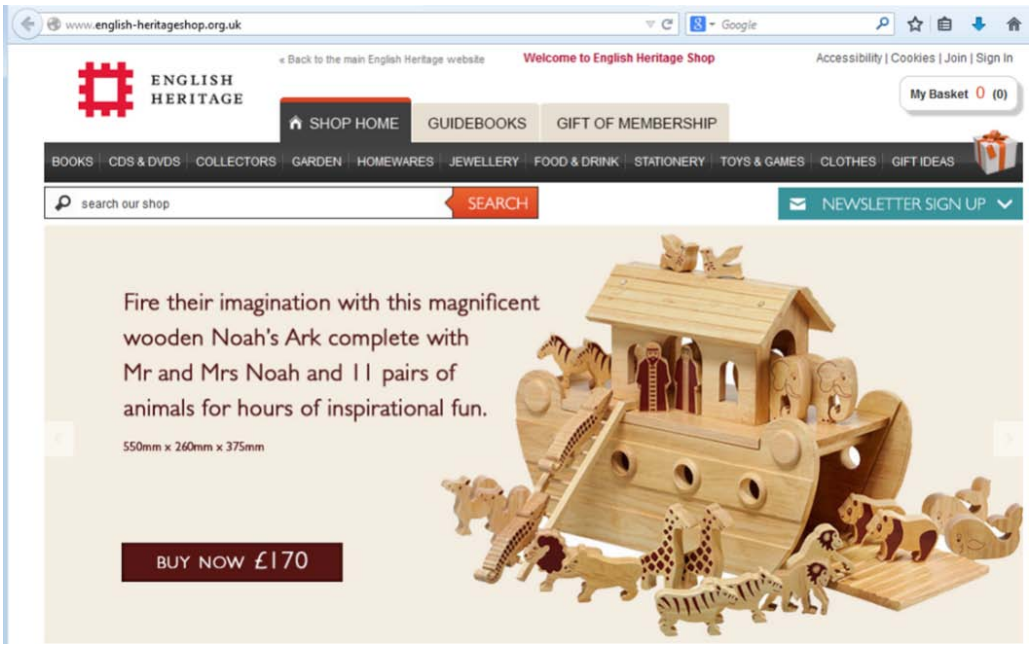
Table 1 below shows all the linguistic expressions belonging to the book ICM that have been extracted from the 'Ten Steps to Writing an Essay' website and from the 'Wikipedia' website, as compared to the expressions proposed by Girón-García & Navarro (2014).

BOOK ICM (Source domain and its linguistic expression)		
Girón-García & Navarro, (2014)	"10 STEPS TO WRITING AN ESSAY"	WIKIPEDIA
Bookmark	-	-
Page	+	+ "special pages", "page information", "page history", etc.
Table of Contents	+	+ "Contents"
Index		+ "Index"
Browse		+ "Browse..."
Find (a word or expression)		+ "search"
Image of a book	+	-
Main page		+ "Main page"
Readers	+	+ "Read"
	+ next	+ "articles", "lists" "Style guide", "Manual of style"

(Table 1: Linguistic expression of the Book ICM)

In contrast to the book model, in the site model, a *site masterwelcomes* and invites *visitors* to *go around*, and they may be requested to *signin* a *reception book* so that their *visit* gets *logged*, or they may *moveback* and *forth* a *path*. Visitors *arrive at* a *site* that may be a rather large area, and therefore they might need a *sitemap*, and possibly some *directions,* to *find their way* in the site, for instance a notice including *you-are-here* indications. Some sites may have a *shop*, and an *info desk* where visitors get answers to frequently asked questions.

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(Figure 2: 'English Heritage' website)

Accordingly, the website http://www.english-heritageshop.org.uk/ (English Heritage) (see, Figure 2) provides linguistic expressions that activate the site model. As the user opens the shop site, an invitation is stated to shop and to discover products ("search the shop"). Table 2 below shows all the linguistic expressions belonging to the site ICM that have been extracted from the 'English Heritage' website:

SITE ICM (Source domain and its linguistic expressions)	
Girón-García & Navarro, (2014)	*English heritage shop website*
Site Map	+ "sitemap"
"You are here"	+ "shopping with us"
Invitation	+ "Explore and discover..."
Sign in	+ "sign in", "join us"
Logging	+ "registering" "logged in"
Visiting	+ "search our shop" "A wide variety of people visit our online shops"
Visitors	+ "visitors"
Back to…	+ "This will take you back to…"
Welcome	+ "Welcome to English Heritage Shop"
Visitors' book	-
Follow us	+"Find a product", "In English Heritage's online shop you'll find…", "Our online shop acts as a gateway…", "you´ll find…"
Area	+ "Departments"

(Table 2: Site ICM linguistic expressions)

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5. Genre hybridization

If questioned about the generic traits of an online dictionary, our first spontaneous and straightforward response would tend to identify that kind of virtual environment with the book model. Therefore, it seems natural to think that the linguistic expressions in the book model, such as bookmark, browse, table of contents, index, and others, should guide the user strategic mode through an online dictionary. Moreover, the "reading" strategic mode would be assumed to be the most adequate. Nevertheless, online dictionaries have evolved towards a rather divergent direction. As a matter of example, let us look at what happens in Webster's Online Dictionary. Of course, the user may look for a word or expression so that a definition can be found, which in fact requires and triggers off a reading mode at first. However, that website hardly makes use of the usual expressions that manifest the book model. In addition, the text of the definition occupies a small section if compared to the whole screen, which relegates that definition to a secondary role from the designer's standpoint. What happened? Other items are present on the screen that provide links to further texts and devices. The user is offered the opportunity to shift onto a range of interactive games, quizzes, further information, videos, and explanations, all of them independent from the traditional dictionary information. The customary paper format type of information, such as definition, synonyms, etymology, phonological notation, etc. remains in the limited section reserved for it. The rest of the screen shows elements designed to prompt hypertextual moves and interaction, and extends modality to visual and audio materials. It is evident that the three characteristics of virtual cybergenres are exuberantly instantiated. Thus, the dictionary allows for jumps from one definition to another, or to the thesaurus, or to other kinds of materials (hypertextuality). Some of these open up options for the user to participate in building the virtual text, offering the possibility to add comments or questions, subscribe to services, or play games and quizzes (interactivity). Finally, video and audio materials combine with advertising images, which guarantees multifarious modality. Such diversity is enhanced by linguistic material that introduces the site model, in addition to the book model mentioned above. Expressions like, "join us", "search", "advertise here", evoke the frame of a market place, which shows an incipient hybridization of cognitive models, and as a consequence, of genres. These phenomena break the traditional scheme of paper format dictionaries and provide evidence that cybergenres like the online dictionary are already hybrid genres. We suggest that this hybridization is twofold. On the one hand, well established cognitive models like the book model combine with other models, like the site model. On the other hand, the virtual medium allows for hypertextuality, interactivity and multimodality. All these factors contribute to guide the user strategic mode.

6. Cybergenre evolution: from traditional to evolved genres

From the discussion above, it may be inferred that genre evolution requires (1) Traversals, (2) Hybridization, (3) Fluidity, in user strategic modes, and (4) Mode switching.

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We have previously mentioned that genres evolve over time in response to changes and social pressures, and if those changes occur repeatedly they can lead to the emergence of a new genre (Cybergenre). Genre evolution was firstly described by Shepherd and Watters (1998) in their classification of Cybergenres as (a) extant and (b) novel. On the one hand, extant cybergenres -*replicated* or *variant*-, include those ones that are based on genres as they appeared in their source media. *Replicated cybergenres* are faithful reproductions of the genres as they appeared in their source media. *Variant cybergenres* are based on existing genres, but have evolved. On the other hand, novel cybergenres -emergent or spontaneous- incorporate innovative aspects which are not derived from any previously existing genre in another medium. *Emergent cybergenres* are genres that have evolved to the extent that they are utterly new genres. And finally, *Spontaneous cybergenres* have no counterpart in other media.

According to these parameters of evolution, in the navigation process, we do not only associate traversals with configurations of space, but we also establish connections across spaces depending on the type of webpage we are dealing with. Thus, web users activate different mental models that make them navigate and interpret digital texts in different ways. It is at this point that we detect some differences with regards to traditional and digital generic taxonomies (i.e. hybridization of genres). The type of reading mode (or user strategic mode) not only has to do with types of users and their tendencies, but also with the cybergenre itself, its configuration and the types of cognitive models that it activates in users (Girón-García, 2013).

In the following, we suggest the association of the degree of evolution in the websites (Shepherd & Watters' classification) with the type of navigation (user strategic modes) implied in each one the websites illustrated.

- Extant replicated genres are based on source genres (manual): as an example of websiteTen steps to writing an essay, is based on the book ICM, and it activates a 'Reading' mode of navigation. As in every manual, readers need a lot of time to read the information it contains, paying special attention to written texts, rather than to images, graphics or any other visual elements.

- Extant variant genre: Wikipedia, which is mainly based on the book ICM, but introduces elements of other ICMs, activates a 'Browsing' mode of navigation. Users can flip through information quickly and examine data in small detail. This 'Browsing' mode is characterized by a quick navigation in which users simply "peck at" information, doing a quick sweep of the contents that they feel are relevant to achieve their objectives. Another example of the extant variant genre is the online shop, for example the English heritage online shop, based on the site model (e.g. a shop). It activates a 'Reading'-'Browsing' mode, because in this kind of website users need to devote plenty of time to read information offered very carefully, paying attention to texts, images, visual titles… that help the user find the pieces of information s/he is looking for. Furthermore, this type of page demands considering graphic and design aspects, rather than the contents.

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- Emergent genre: Webster's online dictionary. Concerning its features, such as new purposes, structure and rhetoric strategies, style and content, etc. Internet users activate a 'Navigating' mode. In this website, users need to devote very little time to read information in particular sections in the dictionary. In fact, in this particular case, this profile of user creates his/her own navigation path when s/he looks for a word or other kind of information on this website. Another example of emergent genre is the "marketplace", e.g. Amazon, which shows a few traces of the site model and activates a 'Navigating' mode. This website demands a 'Navigating' user strategic mode, and therefore the user devotes very little time to read the information that each screen page offers. In this case, users visiting 'Amazon' may have the ability to perform a non-linear path in their navigation, choosing and ordering pieces of information according to their preferences. This high degree of interactivity may cause that users get lost moving back and forth until they find what they are looking for.

7. Conclusions

The standard views on genre description usually discuss issues like the communicative purpose, move structure and rhetoric strategies, but do not tend to consider content and coherence aspects such as the influence of metaphorical models in the configuration of genre schemas. From our point of view, that is a gap still to be filled. In this line, we have tried to shed some light on the role of metaphorical models in genre coherence and structure. We have also pointed out that the combination of such cognitive models may constitute a cognitive tool for the evolution of generic schemas that leads to genre hybridization. In turn, genre evolution in the digital era has brought about an evolution in the way users face their interaction with new generic patterns. We have also investigated this evolutionary process that triggers off the emergence of new user strategic modes. Finally, this search points at the fact that new genres –emergent cybergenres– require a multiplicity of user strategic modes.

We are aware that digital literacy is probably very much influenced by previous cultural knowledge (cognitive models). We have shown that some source domains allow for metaphorical cognitive models to be used in internet genres. These ICMs provide coherence to genres in the internet because they are previously ingrained in both users' and designers' minds. That entrenchment constitutes, therefore, a crucial factor that fosters spontaneous digital literacy. To what extent do users connect or map previous experiential models to the digital environment? In that respect, users will be able to use digital environments more fluently and dynamically to the extent that they are able to perform those mappings. As a consequence, the identification and description of metaphorical models in cybergenres may help elucidate the connection between spontaneous digital literacy and culture.

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