

# **Analysis of Online Product Reviews in the Field of Computing: A User's Perspective**

María José Luzón  
University of Zaragoza  
Spain

## **1. Introduction**

Most online genres are a result of the reproduction and adaptation of existing communicative genres whose features of content and form are already familiar for the users (Yates and Orlikowski, 1992). However, the way digital genres are used may be quite different from their printed counterparts. When migrating to the Internet, the printed genre may be adapted by incorporating capabilities of the Internet, such as multimedia or interactivity. This gives rise to variant genres, which may evolve until they become something significantly different from the original genre. Digital genres may, therefore, present different degrees of evolution, depending on how far the community has gone in using the capabilities of the Internet to improve the digital genre, providing new functions or features (Shepherd and Watters, 1998). Thus, given that digital genres have features afforded by the specific nature of the medium in which they take place, it is necessary to consider these features when analysing them. As Askehave and Nielsen (2005: 3) put it, “Although many web genres have printed counterparts (...) the medium adds unique properties to the web genre in terms of production, function and reception which cannot be ignored in genre characterisation”.

Genre has been traditionally defined as a conventionalised form of communication, which can be characterised in terms of form and content. Accordingly, traditional genre analysis has studied documents almost exclusively from a linguistic point of view, i.e. focusing mainly on linguistic analysis. A fruitful model for genre analysis in professional and academic settings has been the move model proposed by Swales (1990). Genres are studied by analysing their rhetorical structure in terms of functional units, or “moves”, and the lexico-grammatical features that realise these moves. This model poses problems when applied to digital genres, because most of them are interactive multimodal documents, where functionality, i.e. the

capabilities afforded by the new medium (Shepherd and Watters, 1999), is as important as form and content. Therefore, most studies on digital genres have incorporated the analysis of functionality, and some studies focus exclusively on the new features afforded by the medium that make these genres different from their printed counterparts (Askehave and Nielsen, 2005; Bates and Lu, 1997; Bauman, 1999; Crowston and Williams, 2000; Dillon and Gushrowski, 2000; Ha and James, 1998; Herring et al., 2004; Luzón, 2004; Shepherd and Watters, 1998). Kress' (2003: 35-36) proposal that it is necessary to move from a theory that accounts for language alone to "a theory that can account equally well for gesture, speech, image, writing, 3D object, colour, music and others" (i.e. a semiotic theory) seems to be appropriate to analyse digital genres.

The purpose of this paper is to analyse online product reviews in the field of computing, and to determine how the characteristics of the medium shape the genre and influence the way it is used, that is, how the medium affects the presentation of information and the practices of the reader/ user. The analysis will, therefore, focus on the interactive features of the genre. We will analyse the purposes for which the genre is used and how the reader/ user interacts with the text to make meaning. From the analysis of online product reviews we also intend to draw conclusions on digital genres in general and on the aspects that should be considered when analysing them.

## **2. A brief definition of genre**

A genre is a relatively stable form of communication, which creates shared expectations among writers and readers (or speakers and listeners) (Bazerman, 1988; Erickson, 2000), thus making it easier to produce and interpret documents. In the analysis of a genre it is necessary to consider not only its elements and the sequencing and functions of these elements, but also how they are produced, circulated and used (Lemke, 2003; Paré and Smart, 1994).

There are some features of genres that are especially relevant when looking at online discourse through the frame of genre:

- (i) Genres are situated in social practices (Berkenkotter and Huckin, 1995; Miller, 1984). Thus, the features of the genres are influenced by the properties of the recurrent situations in which they are used (including the institutional, technological and social forces) (Erickson, 1997).
- (ii) Genres are dynamic rhetorical forms. Genres appear to serve specific functions within the system of practices of a community and evolve accordingly to meet the communicative needs of the community that owns them (Berkenkotter and Huckin, 1995; Lemke, 2003; Miller, 1984). Agre (1995) explains the development of online genres in relation to a community's activities: they are designed or have evolved for specific communities and "fit into particular activities in the lives of that community's members". Schryer (1993: 208) summarises this dynamic character of genres

by stating that “genres come from somewhere and are transforming into something else”, and Berkenkotter and Huckin (1995:6) characterise genres as sites of "contention between stability and change".

- (iii) As a result of their dynamic character, genres are flexible structures with fuzzy boundaries. This may give rise to hybrid genres, which combine characteristics of different genres to meet contextual needs. An example of hybrid genre is the advertorial, a hybrid of the editorial and the advert (Bhatia, 2004).

### **3. Features of online texts**

Several researchers have studied those features of online texts which make them different from printed texts (Askehave and Nielsen, 2005; Bernhardt, 1993; Sellen and Harper, 2002). In some pieces of research the differences between print genres and their digital counterparts have been analysed in terms of the advantages afforded by the medium (e.g. Crowston and Williams, 1999; Sellen and Harper, 2002). Crowston and Williams (1999) propose using a typology of system value-adding processes (Taylor, 1986) to categorise the functionality of Web sites. The concept of added value is highly useful to analyse digital genres and compare them with their print counterparts: the features that provide added value are those that are beyond the capabilities of the printed genre. Taylor (1986) lists the following ways that a system can be value-adding (what he calls "user criteria of choice"): by enhancing ease of use (e.g., easier access to data), by noise reduction (e.g., providing selected information), by quality (e.g., accuracy or currency), by adaptability (e.g., addressing a specific user need), and by time or cost savings.

Bernhardt (1993) lists nine dimensions of variation that help map the differences between paper and onscreen text. He claims that online texts tend to be more “situationally embedded, interactive, functionally mapped, modular, navigable, hierarchically embedded, spacious, graphically rich, and customizable and publishable” (Bernhardt, 1993: 151). Many of these features of online texts derive from their hypertextual nature. Online texts are embedded in the situations where they need to be used: the user accesses many online texts only when s/he needs the specific information in the text. They do not need to be linear texts, because on the Internet information can be layered and organised hierarchically, so that it is not visible until the user needs it, but it is very easily accessible through navigation (links, buttons, menus, etc.). Hypertext offers the users multiple pathways to construct their own texts. One of the most important features of digital documents is their high interactivity. In most online texts the user has to interact with the text to do things, e.g., clicking on a link to get further information, or on a button to control graphics or animations, typing in information, changing text. The interactive character of digital texts is related to two important issues: dynamism and meaning construction. Digital documents can be edited and changed easily, users can create customised print-on-demand documents, or create interactive documents that are different when different variables are chosen. Bernhardt (1993) claims that screen text “has potential to automatically adapt to individual users,

depending on their settings”. As for meaning construction, a defining feature of web-mediated genres is that meaning is constructed not only by reading a text/site but also by juxtaposing, catenating and traversing sites, so that not all readers see the same thing when reading a digital text (Lemke, 2003).

The effect of hypertext on how meaning is constructed is a topic that has aroused great interest. Several studies have focused on how digital documents are read, on the cognitive processes involved in reading them. Finnemann (1999) proposes that hypertext can activate at least two modal shifts in the reading process: the reading mode (the “reading-as-such”) and the navigation mode or linking mode. The guiding principle in the reading mode is sequential reading. In the navigating mode the reader actively constructs his/her own reading path by traversing sites. When using a web document, the user shifts from the reading to the navigating mode and viceversa, thus employing two different cognitive capacities. Finnemann states that links introduce a “reflexive and a self-reflexive mode: the question what to do next is accompanied by questions such as what are the possible options, what does the system provide, what are my present purposes, would I like to proceed within the universe of the present node, to quit or to switch to another universe and if so to which?” (1999: 30). Readers of hypertext “read with the choice in mind” (Dalgaard, 2001: 179) and hypertext links enable them to “realize the effect of such choices immediately, without being limited by the collection available locally” (Dalgaard, 2001: 179). The reader of hypertext has to construct a coherent whole from all the individual pieces of information accessed through links.

Dalgaard (2001) proposes that hypertext can be considered “the dominant textual paradigm of the web”. Therefore, we cannot disregard this kind of textuality when analysing digital genres. Askehave and Nielsen (2005) draw on Finnemann’s (1999) idea of “modal shifts” in the reading process of digital document to propose a model of analysis of digital genres. They (2005: 98a) propose that we need to extend the traditional model of genre analysis “to account for the fact that a web text also functions in the navigating mode where the text, due to its media constraints, becomes an interactive medium, used actively to navigate the website.”

Lemke (2003) even questions the validity of the traditional concept of genre when approaching online discourse:

Hypertext webs do appear to have some incipient types that might be called hypertext genres (...). But these modes of text are not genres in the strict sense of genre theory. They are broader text types. Genres have traditionally been defined by their conventions of sequencing of functional units, but such sequencing does not exist in hypertext webs as such. But even the hypertext web is not yet truly a text in the basic sense of being a semantic unit, or at least a well-defined semantic potential. It is only a specific user-made traversal through a hypertext web which corresponds to a text in this more precise sense

All these considerations have been taken into account in the analysis of online product reviews reported in this paper.

#### **4. Corpus**

Most online computing magazines are concerned with informing about new advances and products in this field, so they tend to include different types of genres with this purpose. Product reviews are texts of variable length which either evaluate a specific product that has been recently released or evaluate and compare several products of the same category. To carry out this research we have analysed the product reviews in 25 websites. We have chosen just a single product review of each site because we intended to analyse the interactive features, and product reviews in a site share similar features. The sites from which the reviews have been taken are the following:

Anandtech: <http://www.anandtech.com/>

Cnet reviews: <http://reviews.cnet.com/>

Computer Power user: <http://www.computerpoweruser.com/>

Computer shopper: <http://www.compshopper.co.uk/>

Computer User: <http://www.pcguides.com/>

E-pinions.com: <http://www.epinions.com/>

Infoworld: <http://www.infoworld.com/>

Internet Week: <http://www.internetweek.com/>

Irt.org: Internet related technologies: <http://www.irt.org/>

It reviews: <http://www.itreviews.co.uk>

MacAddict: <http://www.macaddict.com/>

MacUser online: <http://www.macuser.co.uk/>

MacWorld: <http://www.macworld.com/>

Maximum PC: <http://www.maximumpc.com/>

MaxPC: <http://www.maxpc.co.uk/>

McHome: <http://www.machome.com/>

Network Computing: <http://www.networkcomputing.com/>

Notebook and Laptop Reviews: <http://www.notebookreview.com/>

PC advisor: <http://www.pcadvisor.co.uk/>

PCMagazine : <http://www.pcmag.com/>

PCWorld: <http://www.pcworld.com/>

The Techzone: <http://www.thetechzone.com/>

Top ten reviews: <http://www.toptenreviews.com/>

Winplanet: software downloads and reviews: <http://www.winplanet.com/>

ZDnetUK: <http://reviews.zdnet.co.uk/>

#### **5. Method**

Online product reviews take very different forms in different sites, depending on the degree to which the capabilities of the Internet have been exploited in each site. Therefore, we do not intend to define the genre in terms of its typical features by carrying out a quantitative analysis of such features. The purpose of this research is

to shed some light on how the capabilities of the Internet can improve and add features to a print genre up to the point of turning it into something different and on how the reader interacts with web-mediated genres. Therefore, we have first analysed the content and form of the genre, i.e. the different types of elements that may occur in the “product review” page and the organisation of these elements within the product review genre. Secondly, we have examined the context where the product review occurs, that is, its relations with other documents both in the site and outside the site. Finally, we have focused on functionality, by analysing the links in the product review page and user interactivity, i.e., the relation between the text and the user.

## **6. Results**

### **6.1. Content and form of online product review**

The main purpose of a product review is to evaluate a product in order to help the user take a buying decision. A printed product review is a linear text, where the reader usually proceeds from the beginning to the end. Some online product reviews replicate printed reviews, but others adapt the printed genre by incorporating features afforded by the new medium, like hypertext, which forces the reader to select what s/he wants to read.

The hypertextual basis of web-mediated<sup>1</sup> product reviews enables high modularity. The text is composed of several self-contained blocks which, linked together through hyperlinks, constitute a semantic whole. Since modular texts enable the reader to follow different paths, they can serve multiple audiences and purposes for reading (Bernhardt, 1993).

The use of hypertext does not only result in differences in content and form with the print review, but also in an extension in the functions of the print review. In many sites product reviews are interactive tools, which can be compared to entries in a database. The review site is similar to a database which provides an interface to access easily and quickly any review of the site, overcoming space and time constraints. Web-mediated product reviews are hierarchical texts: through their links the user can access a great deal of information that remains layered and hidden until/unless the user chooses to see it. When the reader brings the anchor text to the fore, this text becomes part of the text that s/he is constructing through her/his choices.

The analysis of the corpus of product reviews revealed that different sites make use of Internet capabilities to different degrees, which leads to a high diversity of product reviews and great differences between instances of the genre. The boundaries of online product reviews are very vague, since they include different elements in each site. The only obligatory element is the evaluation of the product, including pros and cons and usually a rating or verdict. In a few cases the review is

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<sup>1</sup> By web-mediated genre we mean those genres which take advantage of the capabilities of the web as a medium

very similar to printed reviews, and, apart from the evaluation of the product, it includes very few elements. This is the case of the reviews in *Computer Power User* (<http://www.computerpoweruser.com/>), which only include the product evaluation and a “where to buy” link.

In the cases where online product reviews include more elements, they show different degrees of modularity. In some cases, the reviews only take a page, which include different parts, some of which could even be considered sub-genres within the review. For instance, the reviews in *MacWorld* (<http://www.macworld.com/>) include the following element in the same page: summary (pros, cons, price, company), review as such, where the product is evaluated in terms of some criteria, buying advice, jury test, specifications. But there are other reviews with high modularity, which take different Web pages, each page including a different part or module. These are really web-mediated documents, and adjust perfectly to Askehave and Nielsen (2005: 5) definition of web documents: “texts in which sequence and linearity seem to be suspended. The web text is not intended to be read in its entirety but rather scanned by the reader before s/he finally decides which element to read”. For instance, product reviews in *cnet reviews* (<http://reviews.cnet.com/>) have several tabs at the top, forming a navigation bar, so that the user can select in which part of the review to begin. Each tab leads to a different part of the review on a different page: home page (overview with basic information and with a summary of and links to each of the other parts), review (a more complete review), video, specs, user opinions, essentials (other devices to go with the product), compare, where to buy. Each part of the review also includes a navigational bar, in order to link the different chunks together. Most of these parts are whole genres on their own (e.g. specs, user opinions, video advertising the product, comparison chart), so the review could be considered in fact a constellation of genres joined together which help the reader to take a buying decision. In *PC Magazine* (<http://www.pcmag.com/>) reviews also consist of different pages, in each of which the user can do different things. From the homepage of the product review, which offers an overview with general aspects (editor rating, bottom, pros, cons, price, company, specs), the user can access the other pages: check prices, comparison with other reviews of similar products, buy it here, full review, slide show.

The analysis of the reviews in the corpus shows that the online product review is a variant of the printed counterpart, which has incorporated features afforded by the new medium. As the genre is still in the process of defining its characteristics, some examples are very similar to print reviews, while others cannot be analysed exclusively as texts, because they have features that go beyond features of textual genres. There are two aspects of genre which are particularly remarkable in online product reviews: genre embedding and fuzzy boundaries. Genre embedding, which is very frequent in digital documents (Crowston and Williams, 2000), is a relevant feature of online product reviews, since most online product reviews include other genres (e.g. specifications of the product). However, genre embedding in digital documents may take a different form from genre embedding in printed text. Due to

the high modularity of digital texts, genre embedding is often realised through genre linking. For instance, specifications, a part of many online product reviews, may be incorporated within the review by means of a denotative link (“specifications”). It is the reader’s choice to access them and accept them as part of the online product review genre.

Therefore, hypertext makes it difficult to establish the boundaries of the product review genre. Some embedded genres, such as specifications, are included in the same page as the evaluating part of the review in some sites, while in other sites they occur on a different page. This leads to the question of whether they are part of the genre or they are a different genre closely associated to that of the review. The problem arises because hypertext blurs the boundaries between texts. A clear example is the comparison chart between similar products. This comparison chart, with links from and to all the reviews of the products in the chart, could be considered as part of the different product reviews involved.

## **6.2. Context of product reviews**

Any genre is interconnected with other genres, with which it is used jointly to perform social activities and achieve specific goals. It is, therefore, necessary to examine product reviews in the light of the other genres with which they are related.

Product reviews occur on two different types of sites: (i) online computer magazines and sites dealing with computing technology, where “reviews” is one of the sections of the magazine or site; and (ii) review sites, i.e. sites which only include reviews. There are usually several levels between the site home page and the specific product review page.

1. Home page in a computer site or magazine: a page which is a gateway to all the sections in the site (e.g. reviews, news, how-to, tools).
2. Review home page (the first level/page in a review site and the second level/page in computer sites or magazines): a page which is a gateway to all the reviews in the site.
3. Category page (not present in all sites): a page from which to access the different reviews in a category (e.g. all desktop reviews, all hardware reviews)
4. Product review page: the review of a specific product.

In the home page of a computer site or magazine (level 1) reviews are generally one of the sections, and the user accesses a review page (level 2) by clicking on a button or tab on the navigation bar at the top. The review home page (level 2) includes different ways to locate specific reviews: search engines, links to the different categories (e.g., desktops, laptops, games), top rated products (e.g., top 15 Desktop PCs, top photo printers), latest reviews. The user can also carry out advanced searches, by combining several variables (e.g., category, date of the

review, price, name, company, rating). These review pages are metatexts, which do not include reviews themselves but link and provide access to the different reviews in the site. They, therefore, are a kind of interface for a database, which help in the search process and provide visibility of individual reviews.

From the review page, users can usually go to the category page. This page usually includes a list of the products in this category, sorted according to the criteria selected by the user, and information on these products. This is, therefore, a customised page, which changes with every use. For each product on the category, category pages usually include a brief description and picture of the product, a link to the full review, a brief evaluation, rating, link to users' reviews, a "compare prices" link, a link to manufacturer prices and test report, and a box to select products on the list and create a comparison chart. Thus, category pages provide an abstract of the full product reviews and enable users to go the primary texts if they find them interesting.

The last level is the product review itself, connected to other types of genres within and outside the site. Hyperlinks connect product reviews in the site and also enable each product review to be related with other texts at different levels, forming a web structure. We have already commented that a review may consist of different genres linked together, e.g. evaluation, specifications, advertising video, users' comments. Hyperlinks establish relations between the different parts of the review, in order to form a coherent whole.

There are also links to other reviews within the same category. Any evaluation of a product is based on a comparison with similar products. Online product reviews make this easy, since most of them include sidebar links to reviews of similar products. Additionally, many review sites enable the user to create a head to head comparison chart. This is an interesting online genre, always linked to the different reviews of the products that are compared. It enables the user not only to compare products, but also to go the different product reviews to get more complete information on each product.

Product reviews are also linked to other genres which provide further information on the product, both within and outside the site, e.g. news on the product, messages in a forum related to the product, sites where the user can buy the product online. All these genres are combined with the review itself to help the user in the decision taking and buying process.

### **6.3. Links**

The most explicit way to relate texts and provide context in digital documents is through links. There are several considerations that can be made regarding links: (i) type of relation established between the nodes: generic or specific links; (ii) location of the link: sidebar or embedded links; (iii) source of the link: internal or external links.

### **(i) Types of links according to the relation between the nodes**

Taking into account the functional value of links in terms of the relationship established between the two chunks of information that are connected, Askehave and Nielsen (2005) distinguish between generic and specific links. Generic links provide access to the main areas of a website and are usually “inserted in the top section of the document (e.g., in the navigation bar or a hyperlinked table of contents)” (p. 6). Most generic links are static, acting as navigation bars on the entire site. They are “‘empty’ content” categories, which bring the user from “a point of entry of the topic (A) to the topic *itself* (B)” (p. 6). Specific links are “thematically contextualised” links which “are often inserted further down on the page primarily containing real information and the links are of a changeable nature” (p. 6). Generic links and specific links have different purposes: while generic links enable the user to navigate through the website in a systematic way, specific links enable the user to access information that may be relevant at a specific point of the text, or at a specific reading moment. Since they have different purposes, the cognitive skills necessary to interpret these two types of links are also different. Online product reviews include different types of links according to their genericity:

1. Generic links, which act as a gateway to the different areas in the review site. They usually appear in clusters, providing navigational clues to the site. For instance in *It reviews* (<http://www.itreviews.co.uk>) all the pages in the site include a navigation bar with the following links: hardware, software, games, buyers guide, editorial, forum, newsletter.
2. Semi-generic links. Links which do not occur in all the pages of the review site, but which have the purpose of facilitating navigation among different parts of the site. These may be links which occur in all the pages of the product reviews within a category: links to the products in the same category (for instance, in a review from a product belonging to the category “Budget PCs”, links to all the products in this category), links relevant to all the products within a category (for instance, all the product review pages within the category “notebook” may include links such as: notebook buying guide, top notebooks, notebook accessories, notebook forums). Other types of semi-generic links are those which occur in all the pages within a product review and enable the user to move from one part to another of the review.
3. Specific links: they are isolated links, which do not occur in clusters, and occur only in a specific product review page, leading to information that is specially relevant for that specific product review.

### **(ii) Types of links according to location: sidebar/ embedded**

Online product reviews include both sidebar links (i.e. links outside the product review) and embedded links (i.e. links within the product review text), with different functions. However, due to the structure of online product reviews, in some cases it is difficult to know whether the link is part of the product review text

or it is outside the text. Some product reviews do not include much linear text, but consist of a home page with different headings/links leading to the different sections/ modules of the review. Therefore, in addition to sidebar and embedded links, we could add another category: links inside the product review, which are not juxtaposed with content and provide headings and lead to the other parts of the review.

Sidebar links in product reviews usually lead to other pages on the site or on other sites where the user can get more information on the product or on related products:

- links to other reviews in the same category.
- links to the different category pages on the site and to the different types of products in each category. For instance, from each product review in IT reviews (<http://www.itreviews.co.uk>) the user can go to the categories “hardware”, “software” and “games” and to the different types of hardware, software or games.
- links to a different section on the site which also offers information on the product (e.g. buyers guide, news)
- links to articles and news related to the product outside the site

For instance, a review for a digital camera in *MacWorld* includes the following links, under the heading “related stories”:

| RELATED STORIES  |                          |
|--|--------------------------|
| <i>News</i>  |                          |
| <b>Stylus 800 8MP digital camera shoots in low light</b> | MacCentral, May 12, 2005 |
| <i>Reviews</i>   |                          |
| <b>Canon PowerShot A520</b>                              | Macworld, May 20, 2005   |
| <i>Features</i>  |                          |
| <b>The picture of efficiency</b>                         | Macworld, April 12, 2005 |
| <i>How-To</i>  |                          |
| <b>Faking your focus</b>                                 | Macworld, May 11, 2005   |

Some of these related links are sponsored links, and have a clear promotional function. See the following example from *MacWorld*:

| SPONSORED LINKS                       |  |
|---------------------------------------|--|
| <b><i>Compare Canon Prices</i></b>    | Compare Prices For Canon Cameras In The USA Before |
| <b>You Buy!</b>                       |  |
| <b><i>Canon EOS 20D 8.2MP SLR</i></b> | Reduced Once Again At Amazon. Free shipping.       |
| <b>Order Now!</b>                     |  |

Embedded links in online product reviews are used with the following functions:

1. To add information that is part of the text. For instance, in comparison charts, in order to compare the products according to some criteria, the users can get further information by clicking on a link. This is the case of “specifications”. The charts usually include basic specification, and within the criteria “full specifications” there is a link to the full specifications of each product. Or in the criteria “editor’s rating”, comparison charts may include a numerical rating, and a link to further information.
2. To lead to the review of another product that is commented on in the text, e.g.
  - We recently reviewed another of [Lindy's card readers](#), and at first glance there's not a huge amount of difference between that one and this (IT reviews)
  - At \$2,999, the package obviously isn't for everyone, but if your work depends on a compositing program such as Adobe After Effects (November 2004) or Discreet's Combustion, then you'll want to take a look at the latest version of Shake (MacWorld).
  - The Apple Power Mac G5 received more than just a new OS in recent weeks. Not only do Power Macs come preloaded with the new [Mac OS X 10.4 Tiger](#), they also boast faster G5 processors, better graphics and larger hard drives (ZDNet UK)
3. To define elements, e.g.

The 2.7GHz Power PC processors...feature a faster 1.35 GHz [frontside bus](#)” (Cnet reviews)

Clicking on “frontside bus”, the user is led to an outside site where this term is defined and explained.

This is quite frequent in comparison charts, where the criteria used to compare the products may have a link to pages where these criteria are explained. When clicking on the link, a new window with this information usually opens in a corner. For instance in the comparison charts of *PCWorld* (<http://www.pcworld.com>) criteria such as “Street price when ranked” are explained (Street price when ranked- Prices are gathered on the same day for all products ranked). In *e-pinions* (a site not exclusively devoted to computing) a new window opens to explain concepts such as “chipset”, “operating system”.

4. To incorporate publicity. In some cases when the cursor is placed over the link a box with advertising information appears. By clicking on the box, the user accesses the sponsor page, e.g.

Linspire presents a desktop looking similar to Windows and most of the facilities you'd expect to find in a Microsoft operating system are available here, though sometimes implemented in different ways (It reviews)

SPONSORED LINK

**Visit Dell for an Operating System**

Get up to 30% off selected Dell printers. Also get great deals on digital cameras, projectors, monitors, handhelds, accessories and more.

[www.dell.co.uk](http://www.dell.co.uk)

**(iii) Types of links according to source: internal/ external**

Although most of the links in product reviews are internal, there are also external links. Internal links help to turn a set of isolated product reviews into a database of product reviews, to link all the documents together, enabling the user to access all the relevant documents in the site at the click of a button.

External links help to convert the review site into something beyond a database and enhance the functions of the product review as a tool. Although there are external links to other sites providing information about the product, most external links are useful in completing the buying process. Some product reviews include a “where to buy” link to sites where the user can buy the product online, and to sites where the user can compare prices for the product.

**6.3. Interactivity**

Interactivity can be defined as the reader’s possibility to act upon the text in some way to access it, to perform actions with it, or to affect the way it is displayed. Interactivity takes place when the reader does not only absorb information passively from the text, but s/he engages with the text actively (Bernhardt, 1993). Web-mediated product reviews are highly interactive documents, with a high presence of metadiscourse devoted to instructing the user what s/he can do, and how s/he can do it. This metadiscourse is functionally mapped text, whose position in the document is guided by functional considerations and enables the user to access the information when it is relevant. This metadiscourse has several functions in online product reviews:

(i) It may function as navigation cues, giving instructions on how to move around or where to go to do specific things, e.g.

- Check prices here
- Read the palmOne Tungsten E2 full review here.
- View more price comparison results
- Click on the 'NEXT' link below to find out more.
- Previous...next
- Buy PalmOne Treo 650 securely online at a bargain price
- Guide to the top rated products
- Learn about PC Hardware testing methodology

(ii) It may give instructions on what can be done, e.g.

- Enlarge graphic
- Start slideshow
- Leave a comment
- e-mail this story to a friend
- Click image to open full screenshot
- Format page for printing

(ii) It may function as cues on how to interact with the system, e.g.

- By entering your zip code above we will calculate and display applicable sales tax, shipping and your total price ("Total cost") based on your location
- Hint: to print to a standard letter size page, compare only two products (on a category page where you can create a comparison chart)
- If you think RealPublisher might be the product for you, you can purchase the full version online from Beyond.com (US only). Just click on the icon to your left to jump to the order page, and then wait for the program to arrive by mail order (<http://www.irt.org/software/sw013/index.htm>)
- Don't see what you are looking for? Use the filter menus above to narrow down the results.

The reader can use online product reviews to perform several actions:

(i) Access further information: by clicking on a tab or a link the user brings to screen the specific information in the review that s/he needs. As Dalgaard (2001: 180) puts it, "The most apparent and significant effect of hypertext on intertext is the possibility of following the references directly to the source".

(ii) Trigger content action and connect different types of media to the text. A hypertext environment enables the integration of images, sound and animation in ways not possible in print (Bolter, 2001: 155). In *Cnet reviews* (<http://reviews.cnet.com>) the user can watch a video advertising the product by clicking on "View video and photos". In some product reviews in *Cnet reviews* you can go on a product tour, by clicking on "product tour". This is a multimedia document (including sound, image, motion) advertising the product. The user has to click on different buttons to proceed through the different stages/scenes of the document and to select specific aspects. The user can also start slideshows of the products.

(iii) Perform actions that help the user in the decision taking and buying process:

- compare prices of the product on different online shops. Many reviews incorporate a "compare prices" button.
- create a comparison chart. In the category page users usually have the option of getting a side-by-side comparison of two or more of the products within a

category by clicking the compare box for each product and then pressing a button with the label “compare”, “create chart” or similar.

- buy online. Users cannot buy from the review site, but they are brought to sites from which they can buy.
- calculate the shipping, tax and total cost. By entering the user’s zip code, the computer calculates the cost.
- create a shopping list, add products, and remove products from the list.
- sign in to be notified when a product is available online
- check local availability by entering zip code in a store locator.

(iv) Use the document. In some product reviews users can perform some (or all) of the following actions: e-mail the article, print the article, save the article, publish part of the review on their website, add the review to their scrapbook, add the review to their list, or bookmark it.

(v) Locate information. Most review sites include searching capabilities and advance search, which enable the users to look for any product that interests them, and be taken to the review of such product.

(vi) Customise the page or parts of it. Users can modify the documents or parts of the documents to adapt them to their needs. They can, for instance, enlarge images. They can also choose a printer friendly version.

The “category page” offers the highest number of customisation possibilities. The elements in the page (the different products in the category) can be usually sorted according to the criteria selected by the user. For instance in the *MacWorld* site (<http://www.macworld.com>), the category page shows brief reviews that can be sorted by date or rating. In the *cnet site* (<http://reviews.cnet.com>) reviews in the category page can be sorted by review date, release date, name (A to Z), name (Z to A), price and editor’s rating. The *Cnet reviews* site also offers the possibility to filter the results in the category page according to different criteria (e.g. price, manufacturer, operating system provided, input device types). This way the user can narrow down the results and find what s/he was looking for.

In the category page the user can also create a comparison chart selecting only the products s/he is interested in. Once the chart has been created the user can also modify it by removing products from the chart. This is therefore a customised document, which may change every time the user accesses the page. The user may create a document taking only the information that s/he needs and modifying it.

(vii) Collaborate in the production of the document. Many online product reviews enable the reader to adopt a new role: s/he can collaborate in the production of the document, by reading and commenting on the material. Users have several possibilities to participate in product reviews. They can add their own reviews, rate the product and add comments (which are sometimes incorporated as a part of the

review), discuss the review in a forum, comment on other users' evaluation and state whether they found them useful.

(viii) Provide information which will be used by the site developers:

- the readers can provide feedback to website creators. In *cnet reviews* site, users can select some evaluating statement or write their own comments.
- the computer can also use information from the user to calculate: e.g. "1 out of 4 users found this review useful"
- the webmaster can make use of the reading patterns of the users. Each product review in the *cnet review* site includes links to other products which were consulted by other people interested in the product. Below the heading "People who looked at this product also looked at...", there are links to those products.

Product reviews are therefore dynamic documents which change taking into consideration users input.

There are some review sites where the user can do things not possible in the other instances of the genre examined. In *PC Hardware*, for instance, the user can add her/his computer to a database and compare it with other users' computers. In *Winplanet* (<http://www.winplanet.com>) the user can download the software from the review page. In some review sites the user can also register for free to get notified when a product is available.

## 7. Conclusions

After migrating to the web, product reviews have incorporated features afforded by the medium to different degrees. While in some sites product reviews are very similar to print reviews, in other sites they are fully web-mediated genres, with features that are only possible in the Internet medium and that, therefore, go beyond features of textual genres.

As with many other digital genres, the generic structure of web-mediated product reviews is not clearly defined: they include different elements in different sites, and, due to the possibility of linking different online documents, it is difficult to establish the boundaries of product reviews. Since there are no space constraints and links make it possible to insert text without disrupting the ongoing text on the page, authors can add any element that they consider useful for the users of the site. Web-mediated product reviews could be defined as traversals (Lemke, 2003), genres made up of other genres, where meaning is made on-the-fly, by connecting the texts that the reader considers relevant at each point.

Hypertext and user interactivity have turned web-mediated product reviews into active documents, with functions not possible in print reviews. The review site is really a database, with the review home page providing access to the different product reviews, although they can also be accessed from other points within the

site. All the information within the review site is interconnected, in such a way that the user can usually access relevant information at any point. Links make it possible to relate the different pieces of information within the site. This study has shown that there are different types of links, each of them with a specific function. Links provide any type of information the reader/ user may need to decide whether to buy a product (and they may even provide tools to buy online). They also lead to information which may help the user to understand and interpret the review. There are also links which lead to promotional genres, e.g., sponsored links which lead to company home pages, links to promotional videos, links to news advertising a product. Thus, the analysis of the links helps to reveal the purpose of the genre: online product reviews usually combine an informative and a promotional purpose.

Web-mediated product reviews are tools, where the most relevant aspect is user interactivity, i.e. how the user can interact with them, and for what purposes they are used. As has been said above, users can not only get all the relevant information which they consider important to decide which product to buy, but they also can buy the product online, which involves time saving. In addition, web-mediated product reviews also facilitate many other actions which are impossible or difficult to do with print reviews. They have incorporated many value-adding processes that turn them into useful tools for readers who want to buy a specific computing product.

The analysis of online product reviews enables us to draw some conclusions on digital genres in general. Due to the nature of the Internet and to the great possibilities it affords, web-mediated genres are continually evolving dynamic genres, which cannot be studied as stable genres. The capabilities afforded by the Internet make online genres different from their print counterparts: they have different content and formal features and different functions, and they are produced and used in a different way. In order to analyse digital genres, it is, therefore, necessary, to redefine the concept of genre, and reflect upon the appropriate framework to analyse these forms. In this sense, we agree with Lemke's (2003) statement that "genres are becoming units, raw material, for flexible trans-generic constructions, resources for meaning in a new, externally-oriented sense." It is important to study digital genres from a multimodal and functional perspective, analysing their interrelation with other genres, how users interact with them, how meaning is constructed through links, and whether users follow some meaning making patterns when reading these genres.

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## **ABSTRACT**

### **Analysis of Online Product Reviews in the Field of Computing: A User's Perspective**

María José Luzón  
University of Zaragoza  
Spain

Genre has been traditionally defined as a conventionalised form of communication, which can be characterised in terms of form and content. However, researchers on digital genres consider that when analysing these genres it is also necessary to take into account the characteristics of the medium. Therefore, in addition to form and content the analysis of digital documents has also incorporated an important criterion for the definition of genre: functionality, i.e. the capabilities afforded by the new medium (Shepherd and Watters, 1999). The purpose of this paper is to analyse online product reviews in the field of computing, and to determine how the characteristics of the medium shape the genre and influence the way the genre is used. From the analysis of online product reviews we also intend to draw conclusions on how digital genres can be analysed.

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