

AUTHENTICITY AND AUTHORSHIP IN THE COMPUTER-MEDIATED ACQUISITION OF L2 LITERACY

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ABSTRACT

This paper examines what becomes of the two tenets of communicative language teaching--authenticity of the input and authorship of the language user--in an electronic environment. After a brief review of relevant research in textually-mediated second language acquisition, we analyze two cases of computer-mediated language learning: a) the construction of a multimedia CD-ROM by American college learners of Spanish, and b) the use of Internet relay chat by a Chinese high school learner of English. We discuss what kind of L2 literacy the students acquire through the computer medium. We find that a communicative approach based on the use of authentic texts and on the desire to make the learners author their own words has been changed by the physical properties of the electronic medium and the students' engagement with it. Authenticity and authorship have given way to agency and identity and the presentation of self. Indeed, computer-mediated communication leads us to rethink the authentic, the authorial, and, ultimately, the communicative itself.

Authenticity and authorship have been the two poles between which the teaching of reading and writing in a foreign language has oscillated in the last 20 years. Since the 1980s, communicative pedagogies have stressed the importance of teaching authentic texts used by native speakers in culturally authentic contexts of use, rather than pedagogically doctored texts. Omaggio Hadley's injunction in 1986 (p. 41), "A proficiency-oriented methodology emphasizes the use of authentic language in instructional materials wherever and whenever possible," was reformulated in much the same terms in 1993 (p. 82), "The contexts for language practice should be devised, as much as possible, from culturally authentic sources," that is, from sources sanctioned by the authority of native speaker use. Through the use of authentic materials for listening and reading instruction, learners should be able to acquire "usable skills" in real-life situations (see also Grellet, 1981, p. 7; Higgs, 1982; Nunan, 1989, p. 54; Rivers, 1983; Savignon, 1983).

Early on, and especially in British educational research, the concept of authenticity became contrasted with that of authorship. Breen and Candlin (1980), then Breen (1985) reminded educators that the classroom has its own authenticity, which is as important as the authenticity of the target culture. As Widdowson pointed out, authentic texts are often texts that have been "authorized" by some institutional "authority" who holds the copyright to it and sometimes also the monopoly on its interpretation. But, he adds, "although an authorized text and an authentic text can be seen as the same thing, an authorized interpretation is entirely different from an authentic one. They are, indeed, contradictory...[T]o accept an authorized interpretation of a poem is to deny the possibility of an authentic reaction to it" (Widdowson, 1992, p. 149). Language learners cannot understand authentic texts if they don't "authenticate [them] on their own authority" (Widdowson, 1992, p. 150), that is, reconstruct the text on their own terms. This is

not an automatic process; learners have to learn how to authenticate native speakers' texts and author their own (Kramsch, 1993, 1998; Widdowson, 1990, p. 46, 1998).

These two aspects of communicative language learning--authenticity of the text, authorship of the language user--seem well served by the electronic medium. Hypertext, multimedia, the World Wide Web, are revolutionizing the acquisition of L1 literacy by giving learners access to an unlimited database of authentic materials at the same time as it gives them the opportunity to gain an authorial voice outside the authority of the teacher and the educational institution (Bolter, 1990; Crook, 1994; Herring, 1996; Jones, 1995, 1997; Lemke, 1998; Purves, 1998; Reinking, McKenna, Labbo, & Kieffer, 1998). Some researchers have started examining the effects of the computer on the acquisition of L2 literacy (e.g., Chun & Plass, 1996; Kern, 1995, 2000; Kern & Warschauer, 2000; Kramsch & Andersen, 1998; Thorne, 1999), and they found that it increased the learners' self-confidence, motivation, and communicative competence.

But do these concepts remain unchanged when one switches from print literacy to electronic literacy? In print, cultural authenticity and learner creativity are defined by an identifiable authority, be it the publisher or the institution. The authority of the school and the academic disciplines, which has traditionally been based on print literacy, serves to both sanction and constrain learners' authorial creativity; it schools them into being creative within the norms of expression and interpretation imposed by the academy, the literate readership, and the sheer technical constraints of the publishing industry. What happens when literacy skills are taught in a deschooled environment, that has different rhetorical norms and conventions, an inordinately larger public audience, an immensely enhanced speed and ease of delivery, and where the integrity and permanence of texts are no longer assured? In short, what happens when the acquisition of L2 print literacy becomes L2 electronic literacy?

In this article, the authors look at what becomes of the two pillars of communicative language pedagogy, authenticity and authorship, in an electronic environment. After a brief review of relevant research, we focus our investigation on two cases of computer-mediated language learning (CmLL) in Spanish and in English as a Second Language (ESL). We discuss what kind of L2 literacy the students acquire through the computer medium and how it forces us to rethink the authentic, the authorial, and, ultimately, the communicative.

THEORETICAL PERSPECTIVES

Two areas of research converge to inform our reflection here: recent research in Second Language Acquisition (SLA) and recent insights in the nature of media texts. Whereas most of SLA research in the 1970s and 1980s linked authenticity to the use of the spoken language in conversational interactions, recent trends in SLA are shifting attention to written language and the notion of text, in short, to L2 literacy (e.g., Byrnes, 1998; Kern, 2000; Swaffar, Arens, & Byrnes, 1991).

It is one thing to get along orally in everyday conversations; it is quite another to know how to deal with written texts in authentic contexts of use. The push for cultural authenticity has led since the end of the 1980s to a push for "content-based instruction" (Jurasek, 1988; Krueger & Ryan, 1993; Met, 1991; Snow, Met, & Genesee, 1989; Stryker & Leaver, 1997; Swaffar, 1999) where linguistic form is subordinated to authentic disciplinary content of a textual kind (e.g., French history taught in French). Language is made as locally relevant as possible for the conveyance of disciplinary information; disciplinary expertise forms the background knowledge necessary to understand texts (see, e.g., the foreign-languages-across-the-curriculum movement). At the same time, and under the growing pressure from psycholinguists (e.g., Doughty, 1991; Long, 1990; Schmidt, 1995) who have insisted all along that communication cannot take place without paying attention to one of its major components, that is, grammar (Canale & Swain, 1980), we witness now, after two decades of focus on spoken meanings often at the expense of grammar, a renewed interest in "focus on form" or *FonF* (Doughty & Williams, 1998). Form is seen as constitutive of the meaning of spoken and written texts.

Even though the thrust of the *FonF* pedagogy is restricted to grammatical form and is applied to the design of grammatical tasks (e.g., VanPatten, 1995), it has already been taken as an opportunity to pay greater attention to other formal aspects of communication, such as discourse form and textual form, in the creation of meaning. For example, it is not a discourse triviality that Napoleon Bonaparte should have said in 1799, "Je suis la revolution," (I [unstressed pronoun] am the revolution) and not "La revolution, c'est moi" (I [stressed pronoun] am the revolution). Echoing Louis XIV's famous statement, "L'Etat c'est moi" (I [stressed pronoun] am the State) at a time when he wanted to show his loyalty to the French Republic would have sent the wrong message to his constituency. Similarly, awareness of genre, register, and even poetic and visual structure (Carter, 1999; Hanauer, 1999; Widdowson, 1992) are gaining increased importance in the teaching of texts. The advent of computer technology in language teaching thus coincides with a renewed interest among foreign language educators in the *text*, as the site where content and form converge for authentic communication (Kramsch & Andersen, 1999).

Communication

We know what *communication* means when we deal with written texts of a conventionalized format: texts that are fixed by the rules of typography, orthography, cohesion, genre; texts whose authorial intentions are clearly identifiable, whose intended readers are easily recognizable. But what becomes of communication in electronic texts?¹

In his reflections on media texts, David Graddol (1994) identifies three models of language description that have been used, and are still used, by scholars from various disciplines--linguistics, literary theory, media and cultural studies, and anthropology. Each model has its own conception of both communication and the language user.

Model 1, a structuralist model of language derived from the study of written Latin, focuses on the material substance of language, the grammatical and lexical features of the sentence, that can be analyzed and taught as building blocks to communication. *Meaning* in this model is predominantly seen as referential meaning; the information that is retrieved, sent, and exchanged in spoken interaction or in interaction with written texts. It is the transmission model of language still espoused by many language teachers. Historically, it is from this model of language that emerged the notion of *author* (from the Latin *augere, auctus*: to augment, to create), as the one who augmented the Scriptures through his written commentaries, or added to the pool of knowledge through his writings. Authorship, a legal term, was granted by institutions like the Church and the Academy that guaranteed the authority of authorized versions. Communication in this model depends on everyone agreeing to use words to mean the same thing, codified within the standard language promoted by the academy. The language learner is an idealized, standardized, non-native speaker anxious to abide by the rules of the standard native speaker.

Model 2, a social model, sees language as embedded in its social context. In this model, linguistic form alone cannot determine meaning, rather, one has to take the social and cultural context of communication into account. This is a model inspired by research done in anthropology and sociology, as well as in literary studies. In some languages like Japanese, social meanings might be more codified in the grammar than in other languages, but, in general, model 2 acknowledges that form and meaning vary according to the setting, the situation, the intentions, and the purposes of the language users. Historically, this model of language foregrounds *authenticity* (from the Greek *authentēs*: one who does a thing himself) rather than authority. By advocating that learners "authenticate texts on their own authority," Widdowson (1992, p. 150) is using a social model of language, in which authority doesn't reside in the texts nor in the native institutions that authorized these texts, but in the authentic interaction between readers and texts. Communication in this model sees meaning arise out of the interaction between text and social context, within the norms of interaction and interpretation imposed by a community of language users. The

language user in this model is "a humanist, rational being who displays communicative competence; who negotiates a social world and is responsible for personal actions" (Graddol, 1994, p. 16).

Model 3 is, according to Graddol, a post-modern model of language as it informs media texts. This model takes a broader semiotic view of what language consists of. Born out of media and cultural studies, it is concerned with "signs" rather than words. Music, pictures, clothing, belong to "signifying practices" or processes of human communication of which the linguistic system is only one. In this model, "the boundary between language and non-language is blurred" (Graddol, 1994, p. 17). This model of language is concerned pre-eminently with texts, not with sentences as model 1, or interactions as model 2, but rather, it sees text as a combination of many semiotic systems (e.g., words, typographical conventions, layout, photographs, graphs, diagrams) that are uniquely historicized. That is, they are socially and jointly constructed by many people bound by relations of power and social roles in a certain place and at a certain time. Language users are often described as "speaking subjects," whose "subjectivity" or identity is constructed through discourse. Texts are viewed as speaking with many "voices" (p. 18).

Communication in this model is a site of struggle to be heard, noticed, understood, and to "maximize the acquisition of symbolic profit" (Bourdieu, 1982, p. 76). In this model, authenticity and authorship acquire a new meaning, as Graddol (1994) remarks

[T]exts are not simply read and understood, but consumed, used, exploited ... a text will take on a different life, new functions and new meanings, according to the social activities in which it is embedded... The postmodern language user cannot be said to have particular ideas, intentions and meanings which then become encoded in language, since language users are not the authors of their own meanings: they use the words of others, their utterances and texts are populated with other voices, and they cannot guarantee how their texts will be received and interpreted. (p. 19)

It is precisely because of this uncertainty and the vagaries of reception and interpretation in a post-modern age, that the focus in this model shifts from authenticity and authorship to goal-oriented action and agency, that is, the ability to act upon others and influence their thinking.

In each of Graddol's three models, language is linked to specific technologies for the production and reproduction of semiotic systems--the pen or the printing press, the tape recorder, television, the computer--with their concomitant political economies; each has its own conventions and constraints, its own notions of ownership and gate-keeping mechanisms, its own ideological overlays (Kramsch, 1997). Since they represent different stages in the development of technology, they each seem to build on the previous one, reframing, amplifying, or attenuating aspects of communication found in previous technologies. Thus, there is a temptation to think that computer mediated literacy (CmL) is different from print literacy in degree, but not in kind. Those who hold that view make the following arguments: like print literacy, CmL has its constraints which learners need to abide by. They too need to authenticate the electronic "spoken" or written texts they read on the screen, they too need to become authors if they are to make sense of the (virtual) world around them. Computer learners do this by learning the language variety of their electronic interlocutors, the rhetorical conventions of electronic genres, and by interacting with people and written texts on line. In other words, the computer fosters the same kind of literacy as before, only now with a broader readership that has easier and speedier access to texts. The computer, they argue, is a facilitator, an enhancer of a textual literacy that is fundamentally the same as our traditional print literacy.

Proponents of the first two models would agree with these statements, because they view the technological object and the individual subject as two totally separate realms. It is not the electronic medium that changes things, they say, but human users. Those who espouse Graddol's third model take a rather different view. If texts are indeed indissociable from the "activities in which they are embedded," they argue, if language as semiotic system is inseparable from the events it encodes, then the computer as semiotic medium is itself part of literacy events. It is not a neutral technological object that we can

"master" for our individual or institutional benefit. It is itself an historical event, embedded in the same network of discourse practices and institutional constraints as we are ourselves. For example, by talking about "(hyper)texts," "readers," and "word processors," by referring to "chatrooms" in which we "read each other's messages" and "interact with one other," we have already imposed a print literacy vocabulary on the electronic medium, thus creating the very illusion that a change in technology does not change the activity itself. By saying, "it is not the electronic medium per se that changes literacy practices, but its enlarged readership, its speed of delivery, the multiple scales of its texts, their ease of access," we talk as if readership, time, scale, ease of access, were not constitutive of the medium, as if the medium were "only" the hardware. Yet, McLuhan warned 40 years ago that the medium *was* the message (McLuhan, 1962).

Since then, that insight has been expanded and deepened. Recent work in the politics of science (Latour, 1999), multimedia literacy (Lemke, 1998), and the relationship of technology and ideology (Reinking et al., 1998) has shown that quantitative changes bring about qualitative changes as well. Change the scale and you change the nature of the activity (Lemke 2000, in press a, in press b). Moreover, in a global age of electronic communication, objects and subjects can no longer be viewed as neatly separated--indeed, they have never been. Throughout the history of technological discoveries, we have been shaped by our artifacts as much as we have shaped them.

In *Pandora's Hope* (1999), the sociologist and philosopher of science Bruno Latour argues that, in order to understand the way technology mediates our actions, we have to understand "the mediating role of all the actants mobilized" in the process (p.181). By being "actants" (i.e., agents in a web of other agents that include both human beings and technological objects), we find out who we are and who we are making ourselves to be. Taking as an example a killer with a gun, Latour asks

Who or what is responsible for the act of killing? Is the gun no more than a piece of mediating technology? ... Which of them, the gun or the citizen, is the *actor* in this situation? *Someone else* (a citizen-gun, a gun-citizen) You are a different person with the gun in your hand; the gun is different with you holding it. You are another subject because you hold the gun; the gun is another object because it has entered into a relationship with you. The gun is no longer the gun-in-the-armory or the gun-in-the-drawer or the gun-in-the-pocket, but the gun-in-your-hand, aimed at someone who is screaming. . .(You only wanted to injure but, with a gun now in your hand, you want to kill) ... The twin mistake of the materialists and the sociologists is to start with essences, those of subjects or those of objects ... [But] It is neither people nor guns that kill. Responsibility for action must be shared among the various actants." (p.178-180)

Action, Latour argues, is what defines our existence and, according to him, "existence is action" (p.179). In our actions, we make and are made by our tools. The physical characteristics of computer hardware, rather than being separate from the software and from us, its users, in fact define our actions, that is, our existence. In particular, they bring about fundamental changes in the way we use language and other semiotic systems to represent ourselves to ourselves and to others, and in the way we represent the world.

This paper intends to document some of these changes by examining two case studies that involve the acquisition and use of a foreign language by language learners on the computer.

AUTHENTICITY IN THE CREATION OF MULTIMEDIA

In Fall 1997, co-author Francine A'Ness embarked on a project to create with her undergraduate students a CD-ROM for the teaching of Latin American culture. We let her tell her story in her own words:

I had been collecting and collating visual materials for Spanish 113 (slides, videos, transparencies, music) and diligently filing them away for use in next year's class. I thought that by digitizing the data with my students and storing it in some logical fashion on a CD-ROM, we

could create a useful teaching aid that could also serve to better protect and preserve these newly-gathered materials. The students themselves were thrilled at the idea of making a durable and public product that could be used by future undergraduates and their instructors. I was sure the students would improve their Spanish and their knowledge of Latin American culture in the process.

We began working on the general structure. Using the multimedia authoring program *Toolbook*, we set about conceiving the navigational frame and considering the basic organizing principles of our text. It was to be like a great city, with multiple points of entry and departure. Its three dimensionality would privilege no one region, topic, or time period and our readers would be at liberty (or so we thought) to explore each site at will and in whatever order they chose. Just as we believed we had absolute creative freedom as authors, we also believed we could grant a similar degree of autonomy to our readers. At the click of a button, they would be able to navigate freely across time and space, pausing to take in topics of interest, since, rather than just spreading our information across an indefinite number of pages or screens, we would embed it, layer upon layer, behind images, icons, and hotwords. The whole text would be a complex network of interlinking topics, designed with the purpose of highlighting, both visually and theoretically, the common ties that unite the many cultures of Latin America.

We settled for dividing Latin America up into three navigational frames: one geographical, one historical, one cultural. We then had to consider how to represent Latin America within these parameters and how to name the various parts. At first we opted for five regions, that I could effectively argue were (historically speaking) culturally compatible: Brazil and the Caribbean, the Andes and the Amazon, the Southern Cone, Mexico and Central America, and the North. The latter we included so that Latin America's complex ties with the U.S. could be investigated, and issues such as migration, territorial annexation, or political intervention could be more easily addressed.



We chose to place a small map of Latin America, divided up into the five regions, at the bottom right-hand corner of each page and have each region and its corresponding pages color-coded. To navigate from one region to another, the reader simply clicks on the desired area and is instantly transported to another part of Latin America. Not only is each region a different color but the borders between them are fuzzy and overlap. In a short introductory pop-up text-field, we draw the reader's attention to the difficulties of dividing up such a complex area as Latin America. This is not just because of the instability of geopolitical frontiers. Borders tend to denote rigid differences between nations and regions, whereas cultures regularly migrate across borders, and have a tendency to interact and to modify continually each other. Hence the overlapping borders on our CD-ROM.

After the regions, we proceeded to think up broad cultural categories to store the information we had gathered. We settled for *Language and Literature*, *Maps and Migrations*, *Rituals and Fiestas*, and *Music and the Arts*. The final navigational component was a timeline which divided the evolution of Latin America into five broad historical periods: *pre-colonial*, *colonial*, *national*, *revolutionary*, and *modern*. You may begin, for example, by looking at [Maps and Migrations in the pre-colonial period in Mesoamerica](#). Then, if you go to the map and click on the Andes, you will rapidly be taken to [other screens that deal with a similar topic only in a different region](#). If

you look at [art in Mexico during the revolutionary period](#) and then click on pre-colonial, you will remain in [Mexican art but simply move back in time](#). With the navigational frame designed and fully functional we really felt as though we were making progress. The students next each chose individual modules to work on to fill the frame and set to work.

For the duration of the semester-long project, the students kept journals in Spanish to describe their progress or to vent their frustrations when the technology failed them. In the early pages of their journals they were all enthusiastic and viewed the computer in a very positive light. For them, it was an empowering and democratic medium. They admitted that they were excited by the novelty of the project and felt liberated from the "burden" of writing "normal," "traditional," or "conventional" end-of-term papers. One student wrote "me atrae la idea de hacer algo completamente nuevo y algo que será útil para otros estudiantes en el futuro" (I like the idea of doing something completely new and something that will be useful to other students in the future). Many students thought they could be "more creative" working with multimedia and, without exception, everyone assumed that being able to include moving images and sound in their projects would allow them to generate representations of Latin American culture that were "más real" (more real) or "más auténtica" (more authentic) than the ones they simply viewed in a book. Finally, more than half the students felt the project as a whole had a pragmatic side, providing them with an opportunity to learn useful computer skills that would have a practical relevance beyond the classroom.

The journals clearly show that the students enjoyed the whole project. It was original, useful, challenging, and fun. Over time, however, they became more wary of the medium and more sensitive to the critical issues it raised. For example, they realized that the editorial decisions they had made and the categories they had chosen early on were both empowering and constraining, not only vis-à-vis Latin American culture, towards which they wanted to be accurate and fair (all the while that they were actively shaping its representation), but also towards their own future decisions. Any additional material they wanted to use had from then on, to fit into one of the pre-determined categories; there was no turning back, short of changing the whole navigational frame. By creating a frame and linking each section at the outset, we had inextricably gridlocked Latin America. And while the grid was useful for organizational purposes, it was still a grid and therefore politically compromised. Suddenly, the students were discussing the relationship between power and grid configurations that the CD-ROM project seemed to embody so clearly. This is not surprising since a number of critics have noted the ways in which hypertext or hypermedia literalizes many of the concerns of poststructuralist literary and cultural theory (Landow, 1997; Lanham, 1994).

Furthermore, the very detail that had drawn them to the project--the fact that their finished texts would be both durable and public--made them continually stop and think. They stopped to think about the creative process, about the relationship between a text and its readers, about their responsibility as authors, about the relative merits of the written or spoken word over a still or moving image, about combining media to create new readings, and about power and control. Gradually, they realized that with power comes responsibility. Each module they were creating was to be a window onto some aspect of Latin American culture for future generations of students. Many of them started to experience a form of authorial anxiety stemming from the tension they felt between creative license and an ethical imperative to another culture. While the students wanted to be creative with their projects as the computer seemed to invite them, they also felt compelled to be accurate and fair. Rather than have this anxiety be a problem, I encouraged them to reflect upon the nature of this creative tension, magnified no doubt by the computer, and consider it to be at the heart of the politics of representation--part and parcel of being an author in any medium, be it a traditional term paper or a trendy multimedia hypertext.

An intriguing observation that appeared repeatedly in the students' journals, both critically and uncritically, was the idea that "clickability" translated into "credibility" and that the technology was taking on an authenticity of its own. One student wrote, "poder cliquear sobre una imagen o ciertas palabras especiales y ver que algo cambia hace que todo parezca mucho más real" (Being able to click on an image or a certain special word and watching something [on screen] change, makes everything seem much more real). Without exception, the same sentiment was echoed by the others, but what is interesting is their conflicting opinions about authenticity. The student quoted above appears to be celebrating the computer's ability to make everything appear more real. Another student, however, clearly recognizes that it is her active involvement and manipulation of the primary texts that generate a feeling of authenticity. It is the experience of making a multimedia document on Latin American culture rather than the document itself that lends the project an air of authenticity. She concludes her journal with the following insight, "antes de hacer este proyecto yo era muy poco crítica de la información que veía en el internet ... Ahora sé, y no porque alguien me lo ha dicho, sino porque lo he vivido, que detrás de cada página hay una persona como yo, imperfecta y algo prejuiciada, que está manipulando la información." (Before working on this project I was very uncritical about what I saw on the Internet. Now I know, and not because someone taught it to me, but because I lived it myself, that behind every page there is someone just like me, imperfect and a little prejudiced, manipulating the information).

The aesthetic and ethical dilemmas described by A'Ness and highlighted in her students' journals are particularly well illustrated in the work of two students, Lucy and Helen, who chose to focus on fiestas in celebration of the Virgin. Originally, they were going to concentrate on just one Virgin from Lucy's home country of Nicaragua. However, the ease of creating hypertextual links prompted them to include a section on Mexico's more famous *Virgen de Guadalupe* and the lesser known *Virgen de las Lajas* from Colombia. They opted to place their opening page under the categories *Rito y fiesta* (Rituals and Fiestas) and *Epoca moderna*, (modern period) because such categories already existed, whereas a category like *gender* had not been created--a significant fact in itself, as we shall later. They then had to decide how to arrange the information they had researched in both an eye-catching and informative way. Lucy's journal shows that they were still very much thinking of a CD-ROM as they would an illustrated textbook: "El CD-ROM me parecía más bien un tipo de libro ilustrado donde los dibujos mantienen el interés de los lectores o hacen hincapié en algo importante pero que jamás toman precedencia sobre la palabra escrita" (The CD-ROM seemed to me to be a type of illustrated book, where the pictures are often there to keep the readers' interest or to emphasize a point but they never take precedence over the written word). Lucy in her journal entry still clearly distinguishes between the role of the author and that of the reader; the word "book" implies pages, the primacy of the written word, the supplemental and often ornamental nature of images. Like the other students, Lucy had a print literacy mentality and an understanding of language similar to Graddol's models 1 or 2 discussed previously.

But soon Lucy and Helen realized that filling the screen with text and a scroll bar was not necessarily the optimal use of multimedia technology. With digitization and the authoring program, they could manipulate and juxtapose visual, written, and even aural information in a myriad of ways. Through Spanish, they could learn not only how to compose texts, but how to create and manipulate hypertexts and various representations of Spanish speaking cultures. If we study the four screens they composed on the cult of the Virgin in Latin America we notice an increased engagement with the medium and its potential for alternative modes of representation.

The first and simplest screen is a general index page about the cult of the Virgin Mary in Latin America. They scanned a small devotional prayer card that shows the veiled head and shoulders of the Virgin and they enlarged it so that it could [take center stage on their page](#). They then had to find a way to include all

their introductory information without crowding out the image or running out of space. This was where the use of hot words first came in handy to embed extra information. The first hot word they created was *marianismo* (the cult of Mary). When you click on this word a definition appears in a small text field that floats above the Virgin held by two angels. The students explain in their journals that when they tried having the [text field without any ornamentation](#) it appeared a little bland. They solved the problem by [cropping the two angels from another devotional postcard](#) devoted specifically to the *Virgen de Guadalupe*. That these two figures were removed from the (authentic) context of one prayer card and placed into the (inauthentic) context of another did not cause them undue concern.

The index page contains [three additional hot words that hyperlink to the remaining three screens of the project](#). They correspond to the three geographical locations under scrutiny: Leon in Nicaragua, Colombia, and Mexico. That Leon comes first and is the only town mentioned shows Lucy's desire to foreground the Virgin from her hometown and encourage the reader, if possible, to visit that page first. She soon realized, though, that granting the reader the navigational freedom the medium presupposes, limits the control an author has over the reception of her material. While she wanted to be artistic and use her imagination in the presentation of the material, she also wanted to make sure that the main idea of their project was clear and repeatedly presented in a logical fashion. She expresses her frustration about this in her journal:

La autora tiene tan poco control sobre cómo los lectores van a utilizar su texto. Hay una manera correcta de leer un trabajo escrito y eso es linealmente. Pero en el CD-ROM, con la excepción de poder guiar el lector por medio de las 'palabras calientes,' la autora no tiene el mismo control. (The author has so little control over how a reader will use her text! There is a correct way to read a written paper and that's linearly ... But in the CD-ROM, apart from being able to guide a reader through the use of hot words, the author does not have this same control).

Both Helen and Lucy had been trained in school to see the subtle ways in which writers "manipulate" (to use Lucy's word) their information and control their readers. In no class, however, had they been taught to deconstruct the intertextual subtleties of hypermedia. Working hard to regain some authorial control and predict the reception of their work, they repeatedly looked for ways to guide their readers through a set path while giving the semblance of absolute interactive freedom. This became increasingly evident as they designed the next screens.

The second screen is dedicated to the *Fiesta de la Virgen de la Purisima Concepcion* in Leon, Laura's home-town virgin. To establish a coherence between their index and the three subsequent screens they placed the Virgin once again in the center and put the text around her or [embedded behind a series of hot words or "hot" object fields](#) (images). The image used is a photograph of a gold medallion taken from a book. It has been cropped from its chain during scanning and reframed on a pale blue background. This second page is a little "hotter" than the previous one in that there are now three hot words that correspond to three interchangeable pop-up text fields. The three words *altar*(altar), *grito* (shout), and *gorra* (cap), [explain in more detail the ritual that takes place during the festivities in celebration of this Virgin](#). By embedding the information in this way, the students found ingenious ways to store a lot more text than can actually fit on the screen, thus exploiting the potential of Graddol's [model 3](#) discussed above. They could not guarantee, however, as Graddol pointed out, that their readers would spend the time actively looking for this extra information and that they would interpret their text the way it was intended.

To leave this page there are only two choices: back to the index page or forward to the *Virgen de Guadalupe*. This third page is "hotter" still. The visual logic of the previous two pages is repeated with a [vibrant image of Mexico's national Virgin in the center](#). The image was taken once again from a devotional prayer card but this time it was considerably manipulated for artistic as well as narrative ends during the scanning process. In the original image the Virgin is flanked by four small angels. In each of the four corners there is a [miniature scene that depicts the story of her appearance to the peasant Juan](#)

Diego. In order to make their page more interactive and less crowded, Lucy and Helen decided to divide up the original card into [five separate object fields](#). First, the four miniatures were separately cropped from the original and their edges blurred to conceal the joints. The four angels were erased by blurring (these are the same angels that appear on the first screen), and the Virgin was left standing alone like the two Virgins that had gone before. The four miniatures were then imported one by one and given individual functions, that is to say, they were made hot or clickable. Placed symmetrically in each corner of the CD-ROM page they [evoke but do not mirror their original setting on the devotional card](#). A heading was placed underneath which, when clicked upon, prompts a brief narrative passage to appear. The headings are numbered so as to encourage the reader to follow the story in a chronological way. Clicking on the images serves exactly the same purpose, but using a different route. The Virgin was positioned at the center and also made hot. When you click on her she enlarges to dominate the whole page. This predominance of the Virgin, her central position on the page, and her increasing "hotness" reveal quite explicitly the authorial meaning that Lucy and Helen wish to bring across their whole module. Moreover, it shows how, as they progressed and became more aware of both the technological constraints and the potentials of their new medium of representation, they experimented with and adapted more to the medium's logic or rhetoric of representation.

The final page is dedicated to Colombia's *Virgen de la Lajas*. The [central image the students used for this page](#) was obtained from the Internet. It was downloaded, translated from a *gif* file into a *bitmap* for *Toolbook*, manipulated in *Photoshop*, and imported in a somewhat altered fashion into Lucy and Helen's project. The Virgin of *las Lajas* appears floating in a cave and is flanked by two saints, Francis of Assisi and Domingo de Guzman (a local saint), who stand praying and looking up at her in adoration. The image was too big for the CD-ROM, so it was cropped. Once again, to give the impression that the Virgin is appearing not only to the saints, but also to the reader, the two saints were cropped from the picture, isolated into two separate object fields and enlarged. In *Photoshop* they were then lightened to the point of almost becoming translucent and their edges blurred to give them an ethereal quality. They were then placed on the CD-ROM page opposite each other (again evoking their position in the original painting) and [text superimposed upon them](#). The fact that they are so light does not only lend a symbolic air to the representation but also, for pragmatic reasons, allows the text to be clearly legible on top.

The Virgin, who now stands alone, was placed center stage for the fourth and final time. The final effect the students produced, to continue the logic that they had established on the previous page, was to make this Virgin hot, but not the saints. When the Virgin is clicked on, she appears again but this time larger. What is more, the [saints are now duplicated](#). Not only has the computer allowed Lucy and Helen to grant representational "agency" to the Virgin and not to the saints (since if you click on them nothing happens), but they have also generated a re-reading or re-representation of the original image that they found on the Internet. In the new reading, the Virgin, aloft in her glory, is worshipped, not by two but by what appears to be a veritable crowd of saintly male figures.

It is clear from this project that the students were never simply archiving authentic materials but actively recontextualizing them to create new and oftentimes quite personalized effects and alternative readings of Latin American culture. We could argue that Lucy and Helen have consciously sought out ways to assert both a feminist rendition of the Virgin Mary in Latin America (even though their navigational frame did not include a category on gender), as well as one that decenters the more famous *Virgen de Guadalupe* in favor of Nicaragua's *Virgen de la Purissima*. One could say that they shifted away from Graddol's first two models of language to his third model and its implications. After completing their module, Helen concluded, quite rightly, that multimedia "te hace pensar en las maneras en que se representa la información" (It really makes you think about how knowledge is represented).

AUTHORSHIP ON LINE

The issue of authorship emerges again but in a different form in the use of the World Wide Web by learners of English as Second Language. In a study of young Hong Kong immigrants in California high schools, co-author Eva Lam came across a high school senior from Hong Kong named Almon, who expressed frustration over the fact that his English was still lagging behind, even though he had been in the country for six years. He felt discriminated against in school because of his Chinese accent and was worried about his future life and career prospects because of his inability to speak English like a native. He said in an interview in Cantonese (code-switch to English in italics)

The Chinese are prospering quite okay here. The problem is mainly with discrimination. The Chinese have more problems with English, and so it's more difficult for them to find jobs. Even those who have been here for a long time don't speak like the native-born Americans ... English is my biggest *problem* ... it's like this place isn't my world. I don't belong here. I guess it's going to be very hard for me to develop my career here. And I have a feeling that my English won't be that good even in ten years.

In the latter part of his senior year, Almon became actively involved with the Web, completed a personal home page on a Japanese pop singer, compiled a long list of names of his on-line chatmates in several countries around the world, and wrote regularly to a few e-mail pen pals. His writing ability in English improved dramatically and he felt increasing pride in expressing himself in English. Contrasting the difference before and after his Internet involvement, he said

I can express myself much more easily now... It's not a matter of typing skill, it's the English ... Now I've improved, it's because of *ICQ* or *e-mail* or other reasons ... Before I was the type who hated English, really, I didn't like English. Maybe it was a kind of escapism, knowing I wasn't doing well at it, and so I used hating it as a way to deal with the problem. But I think it's easier for me to write out something now ... (to) express better.

This qualitatively different relationship to English came with a newly discovered ability to express himself in writing via the electronic media, which also helped him to overcome some of his fear and worry about the future

I have kind of changed my determination. I'm not as fearful, or afraid of the future, that I won't have a future ... When I was *negative*, I felt the world doesn't belong to me, and it's hard to survive here. And I felt not many people understand me, or would. I didn't feel like I belong to this world ... But now I feel there's nothing much to be afraid of. It really depends on how you go about it. It's not like the world has power over you. It was (names of a few chatmates and e-mail pen pals) who helped me to change and encouraged me. If I hadn't known them, perhaps I wouldn't have changed so much ... Yeah, maybe the *Internet* has changed me.

Given the changes that Almon experienced through writing on the Internet, our question is, What kind of author was Almon becoming on the Internet?

First, Almon constructed a personal Website through an international server called "GeoCities" (<http://www.geocities.com/main/help/geotour>) advertised as follows:²

Welcome to GeoCities, the largest and fastest-growing community on the Internet ... At Geocities, we provide members with free e-mail accounts, home pages and the best page building tools and online help resources to make personal publishing and community building as easy as writing a letter to a friend. More than 2 million people have already joined, and thousands more are signing up every day GeoCities is a thriving online community of people just like you. We call our members "homesteaders" because they've staked a claim on their own plot of "land" on the Internet There are 15 themed avenues (Entertainment, Arts & Literature, Sport &

Recreation etc.) ... From the neighborhoods, you can peruse the best home pages, visit our exciting, interactive avenues, or just cruise the suburbs.

From this ad, we can see that Web technology offers not only the virtual base for the construction, storage and retrieval of electronic texts, but also a full-fledged metaphor for the building of social and cultural communities. The fusion of the words "home" and "page" merges the two overlapping tropes of rootedness and literacy into an American life-style that is exported over the Internet. One can "peruse" *texts* (or homepages) by "cruising" down the neighborhoods and suburbs of *contexts* (or themes). The names and themes of the over 40 neighborhoods (with branches called suburbs) are characteristically empty stereotypes, or *lieux de mémoire*, devoid of all historical memory. For example,

Paris is the neighborhood of: Romance, poetry, and the arts

Broadway: Theater, musical, show business

Athens: Education, literature, poetry, philosophy

Vienna: Classical music, opera, ballet

Madison Avenue: Advertising

Silicon Valley: Hardware, software, programming

Wellesley: A community of women

Tokyo: Anime and all things Asian

Almon chose to settle his homepage in "Tokyo," where a global community of Asians gathers around Japanese pop culture. Almon's on-line chatmates are located in such diverse sites as the US, Malaysia, Japan, Hong Kong, and Canada.

Almon designed his homepage on Ryoko, a teenage pop singer, by using materials and sources from magazines and other Web sites on Japanese pop (J-pop) music and celebrities. He chose a pseudonym, Mr. Children (also the name of a J-pop music group), to designate himself, hence the home page is called "[Mr. Children's Ryoko Page](#)." It appears on the computer screen with a main page that presents a written introduction, an animated cartoon picture of Ryoko next to her name in Japanese *kanji* (Chinese characters in Japanese script), and a song of hers playing in the background. A side panel shows a list of buttons indicating the other parts of the homepage that can be opened by clicking on them: a profile of Ryoko; a history page with her biographical information; a myriad selection of photos; a music section with her songs that can be listened to on-line or downloaded to one's computer; several video clips; a section called "My Favorite Links" which provides linkages to other personal and institutional Web sites on J-pop music, particular singers like Ryoko, Japanese animations, and so forth; and a page with search engines that one can use to look up other items on the Internet. A guestbook is provided for visitors to sign their comments or view other people's comments.

In the written text on the main page that first comes on the computer screen, Almon presents the topic of his home page, Ryoko Hirosue, and introduces himself as Mr. Children. Almon highlights his ownership of the homepage by the use of the first-person possessive in "my site" and "my homepage," and establishes himself as a knowledgeable and helpful member of the international J-pop community in statements like, "No problem!^_^ you'll find out anythings about her in my site." Multiple channels of communication are provided in the second paragraph, in the forms of e-mail and on-line chat, for Mr. Children and his readers/visitors to establish and maintain contact. Clearly, the homepage represents not only the singer Ryoko, but also Mr. Children, a participant in J-pop culture.

In the section "My Favorite Links," associations are formed with other homepages on Ryoko and various aspects of J-pop music, including animation (anime), and extended out to other interests of Internet users,

friends' homepages, and computer games, a few of which contain the Chinese language. With regard to J-pop music, not only is there a presentation of factual information, but active exhortation to galvanize the J-pop fans community. This is exemplified in the use of imperatives (e.g., "Let join there...", "Go check it now...", "Must Visit") and the modal auxiliary verb "can" (e.g., "A lot of Ryoko's pictures you can get here," "You can try to hear the brand-new songs...", "Here you can download a tons of mp3 files of song," "You can find all TK family official homepage here"). A promotional rhetoric runs through the page, both to advertise for the music culture and industry, and to promote oneself in this culture, as can be seen in Almon's adoption of the name Mr. Children. The descriptor for the link to the homepage of the music group "Mr. Children innocent world" reads, "Please don't mistake this, this is not my home page. This is a regular Mr. Children page. *Check it out, and see why I like this group so much* [italics added]. They are so great!!!" Here one finds the adoption of an iconic figure in the music industry as an identification badge for a J-pop fan. The advertising discourse of the global music and high-tech industry becomes a vehicle for Almon to introduce himself as a knowledgeable and valued member of the global J-pop community, and to participate in promoting its interests and resources.

The formation of gendered social roles emerges in another form of electronic communication--the dialogic exchange of on-line chat and e-mail. Almon says he prefers female pen pals because they are better able "to help somebody grow in self-knowledge and confidence." Female pen pals take on a nurturing, motherly, supportive role. Here is a posting of Almon to Ying, a Chinese female pen pal from Hong Kong (written in English although in other instances, he frequently code-switches to Chinese). Almon had presented himself as a shy person in need of support and Ying had responded accordingly:

Almon. Hum... you said you can share my happiness or sadness, that's great. It is a very important thing to be a good pal. So don't try to hide when I need to share things with you, okay. Also I would like to listen, if you have anything you want to share too...

Here is an exchange with Ada, a Hong Kong Chinese living in Canada:

Almon	I have some photo scans of my childhood and fellowship, I don't know if you are interesting to take look...
Ada	oh... i'm interested... I'm curious to see how you look when you're young.
Almon	Ok, I hope you don't feel sick by look at my pic. hehe ^^ [raised eyebrows/smile]
Ada	I'm sure I won't...
Almon	the pic is very blur...
Ada	You are very happy and cute when you're small :> [smile]
Almon	Yeah, I like my smile when I was a kid. But, I don't know will I smile like that again ... hee hee.
Ada	...you'll have a smile like the one you had when you're a baby ... if you can be as simple as a baby... I mean it in a nice way... Remember Jesus told us that we have to be like a child if we want to go to heaven.
Almon	Yes, I'm 100% agreeing what you're saying. That's what I always thinking, so I very like the people childlike outside, but also mature inside...

Seiko, a Japanese female living in the US, gives Almon advice to which he responds

Seiko, arigatoo for your advice to me (>_0) [eyewink] I will try to more open myself, and be more talkative. But, it takes time to change. Hey, you know what, something can always control my sentiments. Can you guess it? .. Yeah, right. It's music.

If we examine these postings, they sound both very personal and very much like a role-play. The hedges and qualifiers: "you know what?" "Can you guess it?" "hehe," "oh," "hum," "okay," and the ellipses that signal pauses and hesitation, as well as the emoticons of the genre (">_0"), establish a distance between Almon the author and Almon the narrator, between the world that is spoken about and the world in which the speaking occurs (Goffman, 1981, p. 147).

The distancing of the author and narrator also allows for a mutual adoption of the supportive, nurturing role across gender lines in the context of intentional friendship-making over the Internet. This is seen, for example, in an on-line circular posting between Almon and Ada, where the 1st and 2nd person pronouns serve as the deictics for narrative roles that can be associated at will with any speaker:

You are my friend and I hope you know that's true
 No matter what happens I will stand by you.
 I'll be there for you whenever you need.
 To lend you a hand to do a good deed.
 So just call on me when you need me my friend
 I will always be there even to the end.
 Forward this promise to all your friends to show your
 Friendship and see who sends it back.

In this next excerpt of an e-mail exchange, Almon consoles Ying after she has expressed frustration over her relationship with her boyfriend:

Ying, I hope you don't mind. I don't know how to say things to cheer up others. But I really hope you will feel better. Don't be troubled by those people who are not true to you ... You're so kind and understanding ... You'll surely find somebody who truly loves you ... I give you my blessing!

Here we see a bracketing by the author of his own authorial authority through the use of hedges: "I hope...", "I don't know...", "I really hope..." It is as though the utterances that follow the initial qualifiers do not belong to the speaker in the normal sense, but are an animation of a gendered voice that happens to be associated with the speaker in this situation. In fact, one has the feeling that Almon is crossing gender lines and is taking on the nurturing, supporting voice usually associated with the female identity

The gender roles adopted by the interlocutors reinforce the impression of a rhetorical or textual identity that is being developed and that is related to but different from the biographical identity of the authors. Werry (1996, p. 59) notes the interplay between involvement and detachment in the synchronous communication of Internet relay chats:

When communicating on IRC there is a different sense of connection to the word; it does not belong to the speaker in the sense that a spoken word does. Yet at the same time, words exist in a temporal framework which approximates oral discourse, which requires interactivity and involvement, and which invites the fabrication of the texture and signature of an individual speaker's voice.

Almon tries to explain this to one of his pen pals:

I believe most people has two different "I", one is in the realistic world, one is in the imaginal world. There is no definition to define which "I" is the original "I", though they might have difference. Because they both are connect together. The reality "I" is develop by the environment changing. The imaginative "I" is develop by the heart growing. But, sometime they will influence each other. For example me, "I" am very silent, shy, straight, dummy, serious, outdate, etc. in the realistic world. But, "I" in the imaginal world is talkative, playful, prankish, naughty, open, sentimental, clever, sometime easy to get angry, etc... I don't like the "I" of reality. I'm trying to change myself.

But, I think you usually would see "I" in imaginal world because I'm very open to writing e-mail to people. ^^ [Japanese emoticon for smile] How about you?? Do you have two different "I"?? hee hee.

The question arises, of course, as to the originality of the narrative self developed through these networked electronic chats. Many of these students' postings display quite conventional narrative roles, they borrow their codes from Madison street advertising (e.g., GeoCities promotional talk), adolescent Internet talk (e.g., emoticons, oral forms of language), popular psychology (e.g., the need to share and care, to change oneself), and religious discourse (e.g., references to Jesus). One could characterize these borrowings as so many "animations" of other people's discourses (Goffman, 1981) or of multiple "voices in the text" (Fairclough, 1992; Thompson, 1996), and one may wish that Almon would acquire a more "proper" kind of English. Yet it is precisely this "worldliness" of English and the discourses that adhere to its global spread (Pennycook, 1998) that have provided Almon with the linguistic tools to enter into a multicultural world of Japanese pop culture where he finds a community that understands and supports him. The kind of English that Almon acquired through his Internet involvement is the "global English" of adolescent pop culture, not the standard English taught in ESL classes. Whereas classroom English contributed to Almon's sense of exclusion or marginalization (his inability to speak like a native), which paradoxically contradicts the school's mandate to prepare students for the workplace and civic involvement, the English he acquired on the Internet enabled him to develop a sense of belonging and connectedness to a global English-speaking community. Almon is not only learning more English, but more relevant and appropriate English for the World Wide Web community of which he sought to become part.³

DISCUSSION

What kind of L2 literacy did the students acquire in these two case studies? The case study of the Latin-American culture CD-ROM showed that enhanced access to texts of various kinds becomes knowledge only if, as Widdowson (1990) exhorted, the text is actively transformed by the students themselves into a coherent context for which the students take full authorial responsibility. But what is the extent of this responsibility with the electronic medium? In the same manner as the classroom has its own pedagogic authenticity (Breen, 1985), the medium itself imposes its own aesthetic logic on the creation of the material. Many of the decisions made by Lucy and Helen were prompted by the nature of hypertext itself (e.g., ease of hot links, cross-referencing, fluidity of formats, size of screen, color codings). The very procedural power that was theirs to design the architecture of the program (e.g., the three axes of time, space, theme) created a categorical grid to which they were subsequently bound; all the more so as it was a group effort that committed many individuals to abide by the same "story grammar" once they had created it.

The narrative freedom they had dreamed of exercising when authoring the program was further constrained by the uncertainty regarding the audience and the purposes to which the program would be put. By going from slides trays and material files for a specific instructor's personal use, to an electronic

storage device for future incarnations of a specific course, to a CD-ROM for the general use of unknown professors and their students with unknown syllabi and lesson plans, authorial freedom turned into authorial qualms. As in Graddol's [third model](#) of language, the enhanced facility afforded by the medium itself--the ease of intertextual associations, the flexible order of hotlinks, the manipulability of images--loosened the relationship between author and reader. The increased diversity and multiplicity of users of the program, the increased variety of their purposes and interests, their differing levels of computer literacy, brought about changes in the way the students conceived of their subject matter. It was not just like creating an illustrated book, it became a very different literacy event.

Hypertext technology enhanced not only the information value of the texts they chose, but their representational meaning as well. The juxtaposition of multiple written and visual texts on the screen and their hot links to other texts was in itself carrying a meaning that the authors wanted the readers to discover (such as the prominence Lucy wanted to give to the *Virgin de las Lajas*), but the readers would not necessarily accept this and other intended orderings. Not only was the interpretation of these texts up for grabs, but so was their social and historical context. As Bruno Latour pointed out on the example of handguns: change the place, change the time, and you change the object itself. The different space and time scale of the hardware seemed to impose upon the software a different conception of the social and historical dimensions of textual representation.

For example, the representation of the Virgin by the students was no more and no less authentic than the devotional card of the Virgin Mary, itself a composite of a calendar illustration and a cheap painting reproduction. But, in creating their CD-ROM pages, the students colonized local spaces, that is, they transformed the local Virgin, worshipped by local saints and angels, into a global Virgin that could be enlarged on demand for the benefit of a group of learners whose purpose was not to worship, but to learn about worshipping practices and the role of woman and mother in Latin-American culture. The creation of the Latin-American CD-ROM confronted students with the necessity of dealing with the often contradictory demands of local versus global authenticity (e.g., the Virgin as an object of local religious practices vs. the Virgin as an icon of Latin American culture).

One could argue that the same conflicting demands arise with a printed textbook. But in a textbook, the author has chosen to represent the Virgin with or without angels, with or without saints, with or without context, for a very specific purpose. In a CD-ROM, that choice is left to the users, who can change the meaning of the whole by changing the sequence, the scale, and the position of the parts on the screen. Global authenticity on the computer becomes conflated with authorship, that is, with the power to manipulate objects and texts as so many icons. Through the electronic medium, authorship becomes the privilege of any language user, at equal par with any other. The reason why students believed that multimedia was more authentic than a written text may be because they had more power to author it, both as creators and as consumers.

In a post-modern model of language, the concept of authorship is closely related to that of agency. In *Hamlet on the Holodeck*, Janet Murray (1997) reflects on the relationship between these two concepts.⁴ Unlike the print medium that has become for most readers a means of retrieving or interpreting *information*, the computer, she says, is

first and foremost a *representational* [italics added] medium, a means for modelling the world that adds its own potent properties to the traditional media it has so quickly assimilated (p. 284) There is a distinction between playing a creative role within an authored environment and having authorship of the environment itself ... Authorship in electronic media is procedural. Procedural authorship means writing the rules by which the texts appear as well as writing the texts themselves. It means writing the rules for the interactor's involvement, that is, the conditions under which things will happen in response to the participants' actions. It means establishing the

properties of the objects and potential objects in the virtual world and the formulas for how they will relate to one another. (p. 152-53)

Agency, says Murray, is the power to take meaningful action and to see the results of our decisions and choices (1997, p. 126). "The constructivist pleasure is the highest form of narrative agency the medium allows" (p. 149). The pleasure of agency is much more than the pleasure that comes from clicking on hotlinks or even being the author of your own sentences. It has to do with the power to construct a representation of reality, a writing of history, and to "impose reception" of it by others (Bourdieu, 1982, p. 20) by virtue of being computer literate, that is, of holding a legitimate technological expertise. In our case study, we found that hyperlinking of texts on the CD-ROM not only made the students curious about each other's projects in a way that perhaps they would not have been with final papers, but that it also generated a healthy degree of competition among them. As readers are at relative liberty to browse through the program in the order they choose, the students wanted to find ways to make their index page as eye-catching and as enticing as possible. Authors of written language have always had the pleasure of influencing a public readership once their writings got the sanction of public institutions and the publishing industry. Now this pleasure is shared by anyone who has access to a computer and is familiar with the procedural and rhetorical conventions of the genre.⁵ No doubt the experience of representing the world has educational value in itself, as Willis (1993) points out, "Making (not receiving) messages and meanings in your own context and from materials you have appropriated is, in essence, a form of education in the broadest sense" (p. 136). But because the computer can disseminate one's representation of the world inordinately more speedily and economically than the print medium, the feeling of agency is inordinately enhanced.

The concept of agency can help us understand the sense of "empowerment" that Almon experiences in his on-line chats on the Internet. Not only can he create his own frame to navigate the GeoCities server, but he can display an authenticity of feelings, experiences, and memories that he could not express as easily with any other medium. This combination of utmost distance and utmost intimacy, of seriousness and playfulness, authenticity and simulation, has been addressed by Sherry Turkle in her book *Life on the Screen: Identity in the age of the Internet* (1995). Turkle notes the gap that electronic technologies have introduced between the modes of knowing still prevalent until the late 1980s (the generation of the teachers) and that of the 1990s (the generation of the students). In our computer age, Turkle argues, students are less and less interested in accessing deep truths about themselves and the world, nor in finding out *how* the rules and the world work, be they rules of grammar, rules of play, or rules of intercultural communication. Rather, "taking things at interface value" (Turkle, 1995), they seem to be more invested in playing the communicative or interactive game itself. The motto of the era seems to be "you learn to play by playing, not by learning how to play." The kind of language experience fostered by Graddol's *model 1*, in which rules are learned first and then put to use in conversation, has given way to a learning by doing, and learning to meet the demands of doing in specific contexts, to solve immediate problems together in the small culture of communities of practice (Holliday, 1999; Lave & Wenger, 1991; Uber Grosse & Leto, 1999; Wenger, 1999). Rather than an object of reverence or study in itself, language is viewed as a tool which brings people together and creates intimacy (Harmon, 1999). What is important is how you relate, emotionally, and physically, to that world (Grossberg, 1997), not how you understand its deep rational inner workings.

Furthermore, as Graddol noted above, the words one uses might not be one's own to start with. In the same manner as Almon recycles phrases and expressions heard elsewhere, learning a language becomes a matter of assembling a patchwork of discourses taken from various contexts and resignifying them within the local situation of the exchange. Authenticity and authorship in the old sense become of secondary relevance. Almon the author becomes reconceived as the narrator who weaves (Latin *tessere*) prefabricated parts into a new tapestry or *text*. He might only be the animator of other people's words, but as a narrator he has the ability to be both himself and a textual version of himself, as he so eloquently

describes. The use of the electronic medium has changed his sense of identity from a deficient user of local American English, to a competent user of global English, or at least a particular variety thereof.

Internet relay chat offers its users the opportunity to develop several identities that might seem to be at odds with one another, as Almon's real "I" and Almon's fictional "I", but, in the virtual world of the Internet, these identities can be articulated in a coherent multimedia narrative. (Kramsch & Lam, 1999; Scollon, 1996). In her theorization of the global and the local, feminist geographer Doreen Massey criticizes the popular conception of the global as a set of enveloping forces and flows that impinge on the local. Instead, local specificity may be more accurately conceived as created out of the multiple relations that stretch beyond geographical borders. "[If] the spatial is thought of in the context of space-time and as formed out of social interrelations at all scales, then one view of a place is as a particular articulation of those relations, a particular moment in those networks of social relations and understandings" (Massey, 1994, p. 5). Applied to issues of language and identity in networked computers, Massey's articulation of the global and the local makes room for the creation of textual identities that originate from dominant global discourses, but re-articulate the global on the local level. In the case of Almon, the fictional "I," or narrative self, might be viewed in some instances as blurring the boundaries of stereotypical gender roles, and destabilizing the national borders that define his social identity as a "minority." Networked electronic technology may indeed hold the potential of bringing the textual and the social into creative tension with each other, and of reinstating the value of role play, theatricality, fictionalization in language learning. In this decentered perspective, where truth and language do not necessarily coincide, language could be described as "verbal art," a phrase that captures its function as both reference and representation, and language learning as initiation to a new symbolic universe of signs and meanings.

CONCLUSION

In our attempt to reframe the notions of authenticity and authorship in CmLL we have had to resignify these concepts into agency on the one hand, and identity on the other. A communicative approach based on the use of authentic texts and on the desire to make the learners author their own words has been changed by the physical properties of the electronic medium and the students' engagement with it. The powerful appeal of the computer is due to its promise of granting agency and a stronger sense of identity to its users because of its different space and time scales, its easy intertextuality, and its speed of access. The unique characteristic of communication through multimedia or on the Internet is not, as with a printed text, the fact that it puts the reader in touch with a pre-determined authorial intention; it is not, as in face-to-face conversations, the fact that it allows learners to negotiate meaning in interaction with embodied interlocutors in identifiable social contexts. Multimedia and the Internet enable learners to find a voice for themselves at the intersection of multiple time scales, to represent their own version of reality through multimodal texts, and to confront a broad public audience with that reality.

It remains to be seen how foreign language pedagogy will adapt to such a paradigm shift. The case studies presented here potentially challenge the institutional authority of the academy, based on traditional notions of text as repository of knowledge, and of communication as mainly exchange of information. They suggest that language learning via computers does not do away with the definition of communication given by Breen and Candlin (1980, p. 92) as the expression, interpretation, and negotiation of meaning, but that it resignifies "meaning." What gets negotiated via the computer is not only information, but also and importantly "the representation of self and other." The use of computers in multimedia environments (including electronic communication) is slowly but surely transforming our conceptions of foreign language learning by changing the very notions of who we are and how we represent ourselves through language.⁶

NOTES

1. Of course, seen from a communicative perspective, as Rick Kern points out, electronic texts might not be very different from paper texts to the extent that they, too, are differentiated by function, audience, context (personal communication, 2000). (In terms of communication, an e-mail message is very different from a Web page, a chat transcript, or a newsgroup list!) And yet, they all share the same non-material, virtual technology which differentiates them in fundamental ways from material-based print technology, as Bruno Latour (1999) would argue.
2. GeoCities has since been merged with Yahoo!, and the GeoCities link given here is no longer accessible.
3. According to the motto, "Tell me what you need English for, and I will tell you what English you need" (Hutchinson & Waters, 1987, p. 8).
4. Janet Murray (1997) identifies four essential properties of multimedia which might account for the sense of agency the students experienced: "Multimedia is 'procedural' (rules-based), 'participatory' (interactive to varying degrees), 'spatial' (it can represent space we can move through by interactional navigation), and 'encyclopedic' (it has the capacity and generates the expectation to store and retrieve information far beyond what was possible before" (p. 87). The students in Francine's class discovered this logic and tested its representational and narrative potential largely through a process of trial and error.
5. For the moment, there are no gate-keeping mechanisms for the use of electronic technology in education. For example, students are not required to show that they know the procedural and rhetorical conventions of electronic authorship before they are given to "read" multimedia texts nor are such conventions explicitly taught. Lucy and Heather were only starting to discover, through trial and error, that such conventions do indeed exist and what they are.
6. Some anonymous reviewers have expressed reservations about the usefulness of computers in education, unless human reflection, outreach, and collaboration are activated through their use. It has not been our intention here to promote computer-mediated literacy over print literacy. Rather, we have tried to highlight the changes brought about by the new medium in the way language learners think, behave, and use the language for communication. Whether computers are actually used to teach foreign languages or not, the computer is already having an impact on the way our students think and "language" the world around them at the beginning of this 21st century.

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