The Internet, culture and education

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Navigators and castaways in cyberspace: Psychosocial experience and cultural practices in school children's Internet

José Cabrera Paz[1]

The Internet: An imagined object

> Do we know what we are doing with the powerful tools we've created? Or do we just know how to create them? (Howard Rheingold, *Awakening to Technology's Impact*[2])

The Internet was born as a way for the military to communicate during the depths of the Cold War. Just as with the first electronic computer, the Internet was introduced essentially at the behest of US military interests of the time. For two decades after its creation in 1969 the Net was a luxury item accessible only to academic communities in the developed world. Then, in the early 1990s, the creation of the World Wide Web launched it on a spectacular growth path unparalleled in the history of any other communication technology.

A cultural phenomenon like this that has promised so much in such a short time is bound to generate expectations that extend far beyond its utilitarian uses. The Internet serves as a perfect object of desire, one that promises us everything we could want: imagination, creativity, wealth, information, relationships. The Internet is clearly much more than a technological object – it represents a cultural shift that affects all the dimensions of a community, a group or a society. The public schools in our countries are generally seen as wanting in terms of planning, resources, teachers or initiatives. When a technology that promises abundance is introduced in the schools, it generates expectations of a whole new magnitude and unleashes a complex chain of actions and ideas about the object itself and the cultural experience that it represents. Many people will come to think that the Internet is the answer to all their needs. Others will think the contrary. Looking at the Internet in terms of school culture, we can see sharp generational differences in people's technological skills and a contradiction between the way teachers view education and the way their students experience it. Every person's previous experience in the process of technological socialization builds a different context for appropriating Internet culture. While to an outside observer the behaviour of a class of students in front of the computer screen may appear homogeneous, what happens inside each user's head when relating to the Internet will have different meanings.

Some pupils, those who have some background and are able to move nimbly through the "media circuit", come ready and prepared to travel via the Net, and by fusing themselves totally with the machine they become skilled navigators. Other pupils, and most of their teachers for that matter, overwhelmed by the technical challenges, with little training in technological fields and with few tools in their cultural capital, will quickly despair and, like shipwrecked sailors, become castaways. Many of these young castaways, pressured to move with the cultural current that is sweeping their classmates along, will struggle to keep up and will sometimes achieve unexpected success. In a sense, these two groups make up a complex scenario that gives rise to some important questions. What is really happening here? How do they see themselves in relation to the Internet? What does digital technology mean to their daily lives? What does it have to do with the meaning of school?

In the end, perhaps, it boils down to a single question: what do young students do with computers within the symbolic limits of school culture, and vice versa? The answer is probably not as much as they could, perhaps less than they would like and surely more than they think. These are the issues that we shall attempt to address here, from a psychosocial viewpoint using ethnographic tools, in order to appreciate the successes and the setbacks that navigators and castaways experience in the "hypermedia" realm of the Internet.

The standpoint of researchers

Most of the theoretical and practical approaches to new media such as the Internet are encumbered by a predominantly quantitative focus, rooted in market research. When it comes to social studies, particularly in the communications field, such research finds powerful support in the tradition of "impact studies" (Orozco 1995: 191). This basically quantitative approach has produced census figures and information on global trends, reception coverage, available equipment and other highly useful data for configuring a global panorama for the appropriation of ICTs (information and communication technologies) in the region. Yet, apart from these practical uses, as many researchers have shown (Martín Barbero 1987, 1996; García Canclini 1995; Orozco 1995), impact research and quantitative methodologies are limited in their ability to reveal the profound social impacts of the changes that the media (old and new) produce in different contexts, and the logics governing their use. For example, it is important to know not only how many people watch television, listen to the radio and use computers, or how much they like certain content, but also why, and what happens to the consuming audience (and to the technological objects consumed).

In a context such as that of our country, Colombia, which is riddled with social and cultural discrepancies marked by inequality, inequity and social conflicts, defining the form in which computer technology is appropriated and used may require us to recognize some unconventional aspects of "cultural rationality" that are often openly opposed to contemporary scientific and

technological rationality. This puts us in a situation of conflict when it comes to appropriating the new ICTs, and it is on this basis that we have formulated our research question: what are the principal psychosocial experiences and cultural practices generated by Internet use among students in the public secondary schools of Bogota?

The conceptual focus

We adopted a focus that represents a meeting between the psychosocial and the cultural spheres. The convergence inherent in the question was designed to make explicit the blurring of frontiers in the social sciences field. The psychosocial perspective of the question indicates the complex theoretical approach in which personal experience is connected with social experience, i.e. the subject in his individuality is connected with the subject in his interrelationship. The Internet is a network of interpersonal and intergroup contacts, and in the relationships that derive there – from the field that we shall be exploring here – new facets have begun to emerge in the construction of individual and collective identity.

One of the key aspects of social psychology, and one that allows us to relate significant practices with group and individual experiences, is the theory of "social representations". From the pioneering work of Moscovici et al. (1986), through the constructivist contributions of J. Ibáñez (1992, 1994), the concept of social representations has opened up a promising field for linking problems that straddle the limits of various disciplinary traditions (Banchs 1994). In asking about the ways new technologies are appropriated, we were in effect asking about the building of representational structures and about social perceptions and shared meanings. In interpreting the information collected, we assumed that social representation is articulated in a "story" that we can interpret, as a narrative structure that organizes its meanings in different ways and interconnects them as hypertext. Thus, we have interpreted them as we would hypertext: we went through the maze of data establishing meaningful relationships, trends and groupings, on the basis of which we produced the interpretation presented here.

We are also convinced that using a technology like the Internet involves relating not so much with an object as with the universe of cultural representations[3] with which that technology is articulated in students' social life. The Internet is an object that is appropriated within a relational universe where other objects, spaces and practices "resignify" it.[4] To consider the impact of the Internet on the lives of youngsters is to delve into the structure of meanings in which the Internet is inserted and the jumble of relationships that are established with it. To do this, we reconstructed the "narratives" that the students gave us about their relationships with the Internet. In this way, we assumed that what happens with the Internet relates both to the use of the object and to the meanings with which it is represented. Using the Internet is both a practical and an interpretive operation. The Internet is structured

as a relational technology. When a technological object is incorporated into a cultural space, a structure of relationships implied in its use and meaning is also incorporated. The Internet is not only a communicative format or tool, it is a communicative–cultural structure that reorganizes the experience of knowledge and of information, the practices and symbology of human interaction. Taking this concept as our basis, we have assumed that the Internet is incorporated into a space of cultural relationships whereby the object is "resignified" and in turn transforms the spaces that receive it. How does this happen? What meaning does it hold? These are the questions that guided our research. Given the multidimensional nature of the object of study, the school setting was not the only one that we considered in our research, but it was a central focus in terms of organizing our understanding. The interpretation that we present here relates to two points in time: in the first, we conducted an investigation of the Internet in the school itself. Daily practices, educational experiences, teaching cultures and organizational dynamics were the key vectors in the interpretation. As well, recognizing "the transverse structure of the narratives" of the players (the fact that their development always relates to several contexts), we explored practices and meanings that define the interaction of students with the Internet in spaces beyond the school (not in the sense of school as a physical space but rather as a symbolic space). This viewpoint, which refocused our initial perspective in the study, emerged from one broad conclusion: what happens with the Internet in the school culture is defined, to an extent that is difficult to calculate, by what happens outside the school in the social and cultural spaces in which students live, in the places where vital meanings are constructed: those involving peers, context, mass media, cultural industries and technological socialization.

The psychosocial perspective was essential to our efforts at understanding. In addition, we also made use of two specific concepts: the "cultural capital" of Bourdieu (1985, 1990) and the "consumption" of Douglas and Isherwood (1990). The notion of cultural capital helped us to read the relational dynamics of the students, based on symbolic experiences accumulated in their cultural context. The concept of cultural capital, understood to be symbolic as well, is not that of a substance but of a social relationship. As interpreted in this research, social capital functions as the symbolic experience that a subject has accumulated and can "invest". This capital is a function of the social space in which each individual exists, and it is there, in the interrelationships that constitute it, that it will be accepted or rejected, and where the individual will either enjoy power and mobility or find himself beset by limitations and exclusions.[5] The concept of consumption, on the other hand, arose from the interpretive needs of the study. It allowed us to think about the social value of objects consumed and to understand more clearly the way in which they take on meaning in the social world. As García Canclini (1995: 42) puts it,

restating Douglas and Isherwood, "consumption is the set of sociocultural processes in which products are appropriated and used". Consumption is not an unthinking act, nor does it signify docility and passivity on the part of the consumer: it is a deliberate, symbolized act that communicates and integrates with others. "Consumption is defined by its capacity to make sense" (Douglas and Isherwood 1990: 77). It is without doubt an act of shared meaning (García Canclini 1995: 45). Computers, the functioning of the Internet, digital objects – all have multiple uses that are particular and differentiated. They have a function and they therefore serve as a tool: they make it possible to operate within one or several given aspects of a setting. Yet, beyond their functions, in the "world of goods", objects "serve to make and maintain social relations" (Douglas and Isherwood 1990: 75). This is the proper perspective for understanding a technology like the Internet. What began to emerge from Rand Corp. in the mid-1960s was not only a computational structure for establishing relationships and information flows for verifying disasters, it also – unintentionally – created a system for communicating the domestic successes of a country's scientists and the exploits of its warriors.[6]

Methodological option

A methodology must always be selected from a range of possibilities. Consistent with the perspective of interpreting "representations", we have opted for a qualitative approach, in the hope of "positioning" ourselves within the subjects' universe of meanings. Although that might turn out to be a fond hope rather than a real possibility, the attempt to work within the setting of the daily life of the players and with a high degree of interaction gave us the opportunity, if not to get inside their symbolic universe, at least to share it in interaction with our own, and on that basis to interpret it. The qualitative perspective that we adopted has an ethnographic focus (Goetz and Le Compte 1988) adjusted to the circumstances of the study and to the nature of the research object. The qualitative ethnographic model in this project is designed to "reconstruct the narrative with which the subjects construct the meaning of their relationship with the Internet". As Gergen (1996: 232) says: "We do not merely recount our own lives as stories: there is also an important sense in which our relationships with others are lived in narrative form." In other words, telling who we are, what we want and what we do, how we make it possible to be, to want and to do. "Our stories are the universe of meaning in which we represent ourselves and in which we can be represented." Hence, the construction and interpretation of players' narratives, reconstructed with different instruments, has been the key strategy for establishing the most systematic approximation possible to the research question that we set for ourselves.

Research subjects

This research had two kinds of subject population. The first consisted of a group of approximately 30 high schools, most of them public, which were investigated directly in order to establish a global approximation.[7] The second group, the main one, consisted of 6 public institutions, selected from among the larger group. One of these, a privately run school that received official funding, was in the process of becoming public. Two of the schools are located in low-income districts (one of them, in particular, is located next to the historic centre of the city) characterized by poor public services and high rates of violence. Two other schools are in "lower middle-class" neighbourhoods, but have a highly diversified student body drawn mainly from low-income households. The remaining two schools are located in different middle-class districts, one commercial and the other residential. One of these latter schools is exclusively for boys: it offers a technical curriculum and excellent physical and organizational conditions and is well equipped technologically. The course of studies is divided into areas of specialization, including one relating to systems (from which the subjects for that school were selected). We selected groups of boys and girls in grade 10 from each of the six target schools (which went up to grade 11). Of those responding to the questionnaire, 54 were male and 20 were female, and their average age was 16 years. A focus group of about 12 users was formed at each school. Slightly more than 70 percent of these completed the navigation sessions and the series of extracurricular group discussions.

The overall inventory

It has been calculated that Latin America will have an Internet coverage rate of 12 percent by 2005. Comparatively speaking, this rate is fairly low (Valdiosera 2001). Colombia currently has 1 percent of its population online.[8] Most of these people, 55 percent, are upper-class, and 40 percent are middle-class. At the beginning of 2001 the country began to implement a flat rate for connection and to reduce taxes on equipment purchases, as part of a programme to lower the cost of Internet connectivity and expand its use. In the education field, the capital city has experienced a real take-off since 2000 in the REDP programme, intended to provide public high schools with Internet connection facilities.[9] The way this big network was implemented has been criticized by the education community, and in many of the institutions we found that perceptions as to its impact varied from satisfaction to frustration. The last major educational meeting devoted to the issue of computers in city schools showed clearly that introduction of ICTs was well behind schedule, despite the great enthusiasm and high expectations that people had about the programmes that might be developed. Using this information, the contacts we made, and the observations and interviews from

our fieldwork, we were able to establish an overall inventory of profiles showing how the Internet is functioning in a fair number of public schools in Bogota.[10]

Institutional profile

Using the information obtained from the institutions, primarily from the principals and teachers, we established an overall inventory of problems and possibilities with respect to Internet technology. Preparation of the profiles relied largely on the perceptions of the players themselves, rather than on any empirical testing, which was not our objective.[11]

Problems

Lack of equipment and slow and inefficient maintenance service are major problems. The equipment is frequently offline because of minor problems that often take months to fix. Much equipment was lost to theft in some of the crime-prone areas. Apart from the REDP programme computers, most of the equipment is obsolete. The current official programme has had to postpone equipment delivery repeatedly, and this has led to uncertainty and scepticism in the institutions. Organization and management of the equipment in the schools is very inefficient. The equipment is often kept locked up and unavailable for use, for fear of damage or pilfering or because of administrative complications.

Resistance and fears, hidebound teaching methods and the lack of teacher training have conspired to produce institutions with no educational concept of using ICTs. Given the fragmented nature of the curriculum, a project design with no real applicability, and an average of three or four students per computer with only two hours of computer time per week, the institutional setting is not very conducive. The crisis in staff management and professional tension between the central agencies and the public schools are part of the organizational constraints facing work with ICTs. Teacher training has been focused on handling office suites, and the virtual training sessions that are now beginning to be offered have not been very successful, either because of the way the system is organized, the content and methodologies used, or the fragility of the software in use. This means that in schools where the technology has recently been introduced, even though it falls far short of needs, it is underused. The cultural perspective of teachers with respect to ICTs, generational differences and the difficult and complex environmental, community and working conditions in which they must operate have produced a group that is very leery of working with ICTs. Internet penetration prior to the REDP project was minimal and was not sufficiently documented. Despite a few isolated efforts at innovation, the few experiments that can be observed are still in their initial stages and are reduced to viewing the Internet

as a source of information only, ignoring the possibilities of its other, more "collaborative" resources. The contrast with high-quality private education is glaring in terms of projects, equipment and Internet teaching. The current approach of REDP is still tenuous and has a number of shortcomings, and despite the government's intentions it has had minimal impact on conditions in the schools, large numbers of whose students live in conditions of poverty, violence and social marginalization.

Possibilities

The great expectations that institutions have for the new equipment, the tremendous and sustained effort that the city's education authorities are making, the teacher training plan and, above all, the open and innovative attitude of most of the teachers make up what we might call the "available capital" for improving teaching conditions and institutional projects for incorporating ICTs creatively into public education.

Working tools

We started by conducting an overall survey of the way the Internet was being used in some 120 public high schools. With this information, we conducted direct observations in 30 schools.[12] Our main objective was to select a group of 6 institutions with significant Internet activities in terms of appropriation, equipment, student experience and functioning connectivity.[13] We then set up focus or discussion groups with which we delved further into the most significant aspects of the study. As a result of frequent technical breakdowns and shifting school schedules, we found that in order to find a room with proper Internet equipment we often had to work with the students in places outside the schools.[14] We pursued a participatory process of observation both in the school and in the extracurricular sessions. We interacted with the children through chat rooms over the Internet, and in several cases we arranged for audiovisual self-reporting on the progress of their navigation.[15] The Internet work itself was divided into "guided" and "free" navigation sessions. In the guided sessions, students carried out activities proposed by the researchers, while in the free sessions they could devote themselves to navigating without any restriction on the contents they were accessing.[16] We created a web page for publicizing the project and collecting information from participants through free and open chats. We also posted a daily newspaper on "my experience with the Internet", and we prepared collective stories on technological life and conducted an online survey of teachers and students.[17] We interviewed teachers and students in depth on a number of issues relating to the context, the institutions and their personal experience.

The most important, reliable and meaningful information came from the interviews, the discussion groups and the navigation sessions: we organized that material into a group of narratives from which we could detect emerging

categories, and we classified the most important themes in order to establish trends and interpretations.

Presentation of results

This report presents most of the main findings from the study, although for reasons of space we have had to pass over some that were just as significant.[18] The presentation is divided into two settings: the "school context", defined by the significant frameworks that the school imposes on representation and the use of the Internet, and the "horizontal context", which refers to the way the Internet inevitably functions in interrelation with non-school thinking and spaces. The classification of these contexts is of course analytic[19] and, in the end, their dynamics and meanings are constantly intersecting.

The school context

Every school is a microcosm of relations and conflicts, each of its spaces consisting of ruptures and continuities, diversity and uniformity. We have a public school that is conservative but heterogeneous, insufficiently connected with its surroundings and facing a real crisis in defining its goals. It is a school with enormous organizational problems and a fragmented pedagogical perspective. The fact that the student body is low-income and urban gives it certain identifying traits and leads to a series of essentially shared experiences. There is no single type of school. Nor is there any one way of being a teacher or student, much less any clear and consistent approach to producing learning. Nevertheless, the problems in terms of organization, teaching and interpersonal relations show degrees of continuity and similarity among the different public institutions examined in the study. Digital technology is being introduced, then, into a school that finds itself in a profound organizational and pedagogical crisis. The Internet has arrived in its midst, as did earlier technologies, as an imperative, without any textbook for understanding it and with only an abstract promise of resolving fundamental problems. This has generated excessive expectations, considerable dismay and recurrent frustrations. Once the object was there, available, exuberant and tangible, it offered a number of possibilities: the process of trying out alternatives created doubts, resistance and disappointment. Digital technology, as a relational space, has arrived in the school and is transforming it: it will serve either to reinforce the school's traditional experience and making its crises more visible, or to foster innovation and institutional development. With this technology, the school will either renew itself or break apart, it will think of itself as a unified project or it will disintegrate as an institution. These are the two possible extremes, and between them some significant variants emerge. Although the Internet is a very recent technology for the country's public schools, its impact can be seen at various levels of school life. The complexity that the school world represents, the symbolic forms it takes and experiments

with, and the ideas and practices that give it meaning constitute the key places where the transforming impact of "Internet technoculture" makes itself felt.

No tradition is intrinsically inadequate. It is only from the perspective of modernity, with its symbolic flows of constant change, that tradition comes to be regarded as an experience that must be overcome. The school world represents a contradiction in this respect: even in its modern form it has served as a place for conserving traditional practices. It is the tradition of the teachers, of the organization and of the community itself that has defined what the school is to be and how it should conduct itself. This is in fact a major part of its mission as a cultural organization. We may say that contemporary society looks to computers, much more than to other technologies, as a source of renewal. When introduced into the cultural space of the traditional school, into its universe of practices and rituals, technology has a number of impacts. In every institutional setting the introduction of the Internet is producing a dynamic in which various viewpoints about Internet technoculture converge. We shall go further into the main impacts that the Internet produces in school culture. The set of dynamics described represents an interpretive structure. And although we have based our interpretation on trends, it is not always easy to identify, in the practice of each school, the pure characteristics of a single class of behaviour in the face of the educational and cultural process produced by the introduction of a digital technology. On the contrary, we frequently find the school swinging between different dynamics in its relationship with the technology.

The meaning of the school

In thinking about the meaning of the Internet in the school, we must first think about the meaning of the school itself. School culture, its codes and representations, is certainly not the most important thing in the symbolic space in which students move. The media and peer groups have increased their power as a socializing frame of reference, one with which the school is frequently out of tune. "Youngsters", in the various social and cultural manifestations of this heterogeneous group, have begun to bring their own symbolic capital to the school, and the school is often unprepared for it. Children want to behave as kids in school, and yet the school seems to have room only for "students". One teacher in the school that had the greatest sociocultural problems in the study said something very revealing in this regard: "It is here that kids find their vital space because they cannot find it at home. They don't come here to learn – that is the last thing that interests them. They come here because this is where their friends are. When a kid is expelled from school, it is a fatal blow. The worst thing that can happen to a student is to be expelled – they will put up a real fight, they will weep; it's really striking. Or for a student to be told that he's not going to pass is the end of the world because he won't be there with his classmates at graduation. Kids feel that this is the only promotion they are ever likely to have in their lives, it's the only time that they will be putting on the cap and gown" (T-1).

The most meaningful aspect of school life for youngsters is not the learning experience or their role as students but the fact that they are "kids" together. It is a place where their relationship with their peers and their shared cultural codes are the central point of reference and give meaning to their lives. More than for any other player, their role is ambiguous and under constant tension: they are at the centre of school life and at the same time at its margin. Perhaps our school does not yet have a way out of this dilemma: we have more accumulated knowledge about what youngsters need in terms of school culture (how many basic subjects mastered, how many minimum codes, how many skills, etc.), but we do not yet know what the school needs and can handle in terms of youth culture.[20]

We frequently meet youngsters who have learned to structure their life's goals outside the school or despite it. Even if they do not actually drop out and abandon school, institutional life holds no meaning for them in the terms that the school has set for itself. For them, the school is not a meaningful world of knowledge – on the contrary, it is often viewed only as an abstract requirement for some future that they will never achieve and that has for them ever less credibility. While for most of the children in the schools we studied school life had little meaning for the future they saw for themselves, in one school the discrepancy between schooling and future prospects was especially sharp. A teacher at that school, well informed and well respected in the education community, told us: "When I arrived, I found myself in a completely new world. I found myself among a group of kids who wanted to get through school but for whom school had no meaning. I had the impression that they were coming to school because there was nowhere else to go, and that schools like these did not meet their expectations. . . . They come from very poor backgrounds, where their family, or whatever they have by way of a family, does nothing to create sound habits and does not see the school as holding any possibilities for personal or academic growth. The only thing the family hopes for is that the kids might one day get a diploma that would allow them to find a better-paying job than their fathers have, but what we have found in fact is that the kids end up doing the same kind of work as their fathers, and under even worse conditions" (T-4).

Teenagers have constructed various spaces of "symbolic recognition" that show how the modern school has lost its meaning for them. Music, sports, the media, social affirmation within their age group, their audiovisual consumption patterns and their strategies of social expression constitute a parallel world of knowledge and in many cases stand in contradiction to school culture. One youngster told us: "It's a real sacrifice for me to study because I would much rather be out in the street fooling around with my friends. I like to do things that are fun, but when I buckle down to studying I am always bored" (S-37). The hedonistic tendencies of youth, the way they manage their time, their focus on today and their strong preference for being in a group constitute symbolic records of what concerns them most in their lives.

For other social sectors, where for the most part children are enrolled in private education,[21] the school by contrast represents a place that is well

articulated with its social setting. There, youngsters' plans and ambitions for their future life are woven tightly and coherently into their social structures and they have no difficulty in projecting their futures. This is the counterpart to the "school in crisis" that we frequently encountered in this study. For two groups in this study, in particular for one hybrid public–private school, school life represents a place for achievement, recognition and real social advancement. And this happens for several reasons: because of the school, because of the sense of self that it communicates (through its practices and ritualization), because of the fact that there are sectors of the community, family spaces and middle-class cultural contexts that value the school for everything they believe to be true about it, or because they have found in their own lives that the school has been a positive factor for social advancement.

The Internet in the school context

Every age experiences its own outlook, which, at each social moment, constitutes a "field of vision", of objects that are discovered and objects that are hidden. The contemporary field of vision that is being built in the life of the Internet is multiple, disorderly and fragmented. It has gained in depth, territory and angles, while it has lost unity and has become dispersed. There are today a greater number of objects to look at and various ways of looking at them. And youngsters represent the Internet to themselves in this way, as a space where everything can be seen and everything can be shown. It is frequently represented as a space without censorship, available to anyone who wants to fantasize by looking at objects of desire. One girl told us: "With the Internet, you have nearly the whole world in your computer, and you can investigate a lot of things that you never thought you could . . . , even the Sea of Japan, which is way over there" (S-23). As a result of this "symbolic availability" with which they represent the Internet, youngsters see it as a space where everything is visible to the navigator, whether he goes looking for it or simply stumbles across it. Increasingly socialized in an audiovisual culture, kids find in the visibility that they attribute to the Internet a space of great cultural gratification. This representation of the Internet's visibility is consistent with an elemental experience in the urban cultural life of these kids: the city's shopping malls. Regardless of their social group, their institution or their interests, most of the youngsters in the study said they were frequent visitors to these places. One girl boasted of how familiar she was with them: "My favourite places are shopping malls, I like to go there a lot, even if just to look, I just like them, I can't say why, they enchant me. I feel good and every time I go I find something new, I know where everything is and if I see that they have replaced a pair of jeans with new ones, of a different colour, say, well I take that all in" (S-27).

The symbolism that the shopping centre radiates is: "Come on in, see it all!" It is built in such a way as to enhance the visibility not only of things but

of people too – it is the perfect place to "see and be seen". Children see each other, they show themselves off, they form circles of mutual recognition and social interaction, they ogle the wares, imagining them their own, they rekindle their fantasies of possessing them – but since they have little money, they rarely buy anything. In a place dedicated to consumption, youngsters who have no real purchasing power reinterpret the consumer dynamics of the mall, converting it into a place for socializing and interrelating with others. Now on the Internet they behave just as they do in the shopping malls – they want to see and be seen. In the chat rooms they seek out relations and advertise their own availability for a relationship. They surf through the pages of brand products that identify them as a generation of consumers, even though very few of them have ever bought anything over the Internet.[22] They indulge in the fiction of buying online, even while they complain of the advertising overload that swamps web pages.[23] From this viewpoint, their experience has much of the "intentionality" that Barthes (1985: 158) attributes to media culture: "Mass culture is a machine for showing desire. 'Here is what must interest you,' it says, as if it has guessed that men are incapable of finding what to desire by themselves."

Just as in the shopping centre, children navigate without any fixed direction – every object is a "possible desire", every place is a point of reference. They have no starting point and no goal to reach, only ceaseless to-ing and fro-ing. It is this sense of drift that shopping centres were designed for: every corner of the place invites us to linger, to wander from one spot to another without ever leaving. On the Internet, every link is a temptation to move on to another link and to stay online, to find ever newer and more enticing objects of desire. As one boy put it, "You reach another site and you find it interesting navigating in another theme. Let's say you're looking for stuff on football. Then you find something that sends you to another page and you end up learning about tennis or something else. If you're really keen, you'll stick with football. But sometimes you start out looking on the Web and you find something more interesting and you think, well, football isn't that great, so you forget about it and move on" (S-13).

In this "logic of the visual", the Internet functions as a vast and opulent shopping mall of planetary scale, and yet this exercise of looking at things on the market, which identifies them as a generation of young consumers, also reminds them of the limits imposed by their own poverty. The abundance of "other people's objects" is the mirror of what they themselves do not have. "We have information overload", said one boy, "and it really opens your eyes. The Internet gives us the chance to be better informed and to appreciate more clearly how little we can get here, locked away in an underdeveloped country" (S-25). The things that can be seen on the World Wide Web serve to highlight what is unavailable locally. The globalization on which the Internet is built becomes a symbol for the limitations of one's own space. The user's gaze is expanded to embrace other territories, a wider place, desired objects that are beyond reach and available only in the "developed world"

of others. That distant and hardly imaginable space is the space of abundance, of greater pleasures and desires, with objects that "we never dreamed we could explore" (S-23). Their own space, compared to the wealth of others, is suddenly seen as poor and underdeveloped. Their relationship with the technology recalls an old progressive legacy: we look at ourselves in the mirror of the journey that someone else has made and that serves as an "example" for what we want to do.

From this perspective, the Internet represents for youngsters an enormous shopping centre where "others" exhibit an opulence that they can only contemplate and dream about. One of the differences that the children cited most frequently about their contacts in other countries had to do with the objects that those people had, including technology. This probably reveals the logic of "being through having". Experience differed significantly between the study groups. The differences were directly related to cultural capital and social position. For those higher on the scale of cultural and economic capital, the world of the Internet is less inaccessible and more familiar. In contrast to teenagers from poor backgrounds, who pass through the shopping centre without consuming, these children have been socialized as effective users of the products and services of a city that, in the neighbourhoods they inhabit and frequent, is fully transnational. For these children, the Internet is a space for reaffirming their identities as consumers. The fashionable clothing, the latest recordings, the first-run movies and the designer tennis shoes they seek over the Internet are all at hand. As they see it, the Internet functions as a source of information about their daily lives.[24]

The digital Aleph: Omnipotence and simultaneity

Jorge Luis Borges, in a suggestive piece, related the story of the Aleph. This is a point in space where we can experience all times, all places and all knowledge simultaneously – terror and beauty in the same instant. The Aleph is a frequent metaphor and, for many users, a near-perfect description of the Internet. One of the most frequent representations of the Internet that youngsters constructed was very similar to the Aleph.

It was common for the children, in their stories, to reconstruct the image of the Internet as a limitless space inhabited by all available human knowledge, as a reservoir of infinite objects. This representation has some peculiar characteristics. One youngster translated the image in these words: "The Internet is like a huge library, the library of life, of the world, the library of the whole world; we can look there for whatever we want and this is good for the sake of humanity. For example, you see something that you know is far away, something you really like, something you had always wanted but you thought it was for when you are grown up, that you would have to wait your whole life to get there and do those things, but now you can get there in a flash through your computer" (S-41).

Together with the representation of the Internet as a source of abundance, something instant and visible, there emerges the image of an object that

embraces everything and is therefore omniscient. Every culture creates its places of wisdom and gives certain people the role of sages. For the school, wisdom used to be found in books and it was administered by the teacher. For these technoculture kids, the digital Aleph of the Internet is the place to find contemporary wisdom and it is available at their own initiative. "There's a tremendous amount of information that you can find on the Internet," said one boy. "We find information of every kind, about schools, universities, professions, all fields. That's what keeps us informed about everything that's going on in the world" (S-25). The wisdom of the Internet, its capacity to contain everything that is humanly available, has a profound implication for youngsters: it keeps them informed about what is going on in the world. In this respect, the Internet functions as "a symbolic device for connecting to the world". This is the logic of a youth culture that is focused on the present. "Current" information becomes one of the fundamental values of their audiovisual and digital consumption. Much of this information is useless and irrelevant for practical purposes, but other information becomes indispensable material for their social relations. With their data on sporting events, the romantic adventures of their audiovisual heroes, musical hits and new outfits, children build "networks of conversational interchange". They turn information into an object of daily relations with others. In their stories, edited and rewritten with material from their technological imaginings, the children confirm their social and cultural identity. In their chat groups they discuss their media tastes and their favourite songs and personalities, or they argue the prowess and prospects of a football team. Information makes it possible to relate socially with their peers. And in youth culture, this has great symbolic meaning. That is why it is so important to keep themselves informed – in this sense, the wisdom of the Internet is uniquely and irreplaceably useful: not only does it convey information, but the source itself is often a sign of prestige. Untiring in their pursuit of social relations, eager to enter into multiple relationships, to explore the world of others and to demonstrate the "specialness" of their own, youngsters identify the Internet as an object that, because it is all-knowing, is increasingly all-powerful. "For the future", said one youth, "I see the Internet as the greatest source of information, much more than television, and certainly much more than radio or the press, they are no use, there is only the Internet, soon it will be the main thing" (E-26).

This representation of the Internet probably corresponds very closely to what we might imagine the Aleph to be. But in one important aspect the match is imperfect, or at least it suggests a variation to the metaphor. That aspect is time. The Internet meshes very well with temporal space, with youngsters' preference for focusing on the present. Immersed in the symbolic ambit and dizzying pace of the audiovisual media, adept at decoding the codes of fashion, they see in the Internet the image of things that have no past. The original version of the Aleph embraced both the present time and all times. The version of children today focuses on what is now and what is new. The Internet is not a story that can be told in the past tense. "The Internet", said one student, "shows kids. There are no pictures of old people,

the Internet doesn't show outdated things, it shows everything in colours" (S-33). In the present, nothing is accumulated and yet there is abundance; it is a context of constant transition and mutation. In many cases, the quality of a web site will be measured by the timeliness of the last update. Nothing can be old on the Internet. To be out of date is the worst thing that can be said about something on the Internet. Since everything is transforming, updating and renewing itself, the Internet signifies for youngsters a place of perpetual motion. "The best thing about the Internet", said one boy, is "the ability of the technology to keep up with trends – the Internet is 'with it', it's constantly being brought up-to-date, it keeps pace with everything, if you're on the Internet you're really plugged in because you know everything that's going on right now in the world" (S-33).

For many young users, the Internet is the realm of instantaneity. The computer industry has constructed a culture where everything can be replaced by an updated version, which is always better than the previous one. A program can be updated, supplemented, perfected. There is always an "updated" version of a program, but there is never a "final" version. Or if there is, it means that the program has failed and the company making it has disappeared. "In the digital world everything is perfectible." This rule applies with special force to the Internet. Current and immediate are the criteria for judging the importance and truthfulness of what exists. "Truth", a value that school culture promotes strongly, comes to mean for the youngsters "the latest". On this point, one girl said: "If you are looking for up-to-date information on Colombia's economy in books, you won't find it because books only show things the way they were when they were published; but if you look on the Internet, you'll find things the way they are right now, not the way they were three years ago" (S-23).

Not only is the book – the school object par excellence – seen as a symbol of the past, but the Internet is the technological space of the present. The Internet is constantly being updated and producing "more truth". For a young student, three years is an eternity. As in video games, time is a record to be beaten. The speed of the technology is one of its commercially most significant features. Digital objects have been advertised as products of the greatest and swiftest change in the history of the world. In three years the most popular computer operating system can go through two versions, or a spectacular new software company can appear, and each new generation of chips doubles the capacity of the previous one, and so on. Nobody can doze off on the Internet – and this is not only because the chat rooms never close or because of time differences between the hemispheres, but rather because users demand and producers supply a new version of the object and the old one instantly loses its value.

The crisis of administered knowledge

The public school in this study tends to be a traditional institution, with a vertical division of roles and an administered distribution of knowledge. The

linear curriculum is the most tangible expression of its approach to knowledge. Through it, the school culture defines what children must know, in what order, in what quantity and with what emphasis. School culture is a clearly delimited space and the school as an institution imparts the knowledge that society believes should be taught. It is into this organization and this form of social time that the Internet is being introduced. The relationships, content, formats and ways of conveying this technology are far from uniform. Its accessibility, its many expressive codes, the information that it conveys, the communicative experiences that it evokes, and its contextual relationship all function in a way that is opposed to the organization and timing of knowledge in school culture. This opposition produces varying experiences in relation to the administration of knowledge offered by the school.

Giving voice to what many of her classmates have experienced, with classes of more than 40 students, dissatisfied with the traditional offering of her school, complaining of examinations and teaching methods, one girl told us about her daily routine: "We study and they assign us four or five pages of this textbook or that, and the books come and go, but I'm not very impressed. All that information, and by mid-year we've forgotten everything" (S-22). This school experience signifies a routine approach to study, learning a text, filling in the blanks, passing a test – academic work is seen as nothing more than acquiring arid knowledge that is confined to the pages of a book. Resentful of having to perform monotonous, repetitive and meaningless tasks, these youngsters – who are used to the heady pace and varied fare of audiovisual media – see the school, with its rigid and limited teaching approach, as an experience that runs counter to their media-acquired knowledge, their pace of learning and their needs for new connections with their environment. In this context of dissatisfaction, the Internet appears, with all its new, instantly available and manipulable objects, to reinforce the audiovisual codes they have developed. As a symbol of connectedness to the world, to "today", the Internet breaks down the logic underlying the school. In the first place there is the territorial symbology. The classroom, where the teacher rules and where knowledge is exclusively organized and imparted by him, is confronted by an object that is outside the classroom, that opens a window on the world, that connects to the environment and contradicts the inside – outside dichotomy. The Windows interface, which since the late 1980s has become the most popular digital iconography, contains a permanent representation of viewing space. A window is always a design for communicating spaces – when placed on the walls of a school, it is a symbol that breaks down its boundaries, a "centrifugal object". For a teacher, a child perched by the classroom window gazing out impatiently at the playground and waiting for recess is the most discouraging spectacle because the child is in the classroom but wants to be outside. The teacher finds this incomprehensible – such behaviour is simply not allowed in the orderly setting that school learning requires. Once digital technology arrives in the classroom, cloaked with educational authority, thanks in part to the advertising it carries, the activity of this same student, seated before the virtual window of his

computer, seems much more legitimate for the organization of the school, even though he is still seeking an escape and indeed is looking much further than the school yard. These are two distinct windows, the first reprehensible, the second undefined and not yet controllable but undoubtedly more centrifugal and powerful as a means of escape. "Contact with technology", said one boy about the Internet, "opens new horizons for a student to learn because if you're sitting there with the teacher writing things down on the blackboard and saying, pay attention and copy this, it's no use, you have to work with a computer and then you can see further. Outside school there is a lot of useful stuff" (S-24).

Sensing that the school is teaching them content out of context, anachronistic and fossilized knowledge, the children take to the Internet with the gusto of someone who has finally found what he was looking for – the "outside world". This is one of the tensions that the Internet introduces into the restrictive space of the classroom. It places youngsters in an ambiguous position with respect to the boundaries between the school and their surroundings. On one hand, we might say that those boundaries are expanding and that the school is becoming more connected with its environment, that bridges are being built between the school and the world. With the Internet, we have a school that is "less school" and "more world". This meets one of the most ardent desires of youth: to know about the contemporary world. At the same time, we could say that the ambiguity that the Internet produces in the boundaries of the school has to do with a redefinition of two key notions about its symbolic space: the "inside" and the "outside" of school life. Although these categories have been the subject of much debate in postmodern literature, it is important to consider their meaning in relation to our project. On one hand, redefining the "inside/outside" dichotomy of the school has to do with the type of content and experiences that enter into the school when the Internet is introduced to it. When a student secretly joins a chat group or listens to music during class, this means that a fragment of the "non-school world", with content that means nothing in the current definition of school, has now penetrated it. On the other hand, if a student practises a second language through a letter-writing program, this is quite legitimate in terms of the school–world relationship. In terms of the current self-definition of the school, it is not always clear at what point the Internet is really introduced into its culture, even if it is physically there. With the earlier technologies that were introduced to the classroom, it was easier to manage and place limits on what was "school content" and what was not. If students were watching a football game on television, it was clear that this audiovisual experience had no place in the school, except perhaps as a special innovation by some teacher who wanted to show the impact of mass events on society.

With the Internet, this division is not always clear, at least for the groups covered by our study. We must ask, then, when the children are navigating with a computer in the classroom, whether they are really in school, or rather whether the Internet is really there. The situation becomes even less clear if

the teacher fails to do what is normal in the classroom: to control the organization, supply and assimilation of content, conduct evaluation tests, lay down guidelines to prevent his disciples from scattering, and impose discipline on a large group within a cramped and uncomfortable space. The navigation experiences that the youngsters reported with the Internet betray a general pattern of control by the teachers. Contrasting Internet use at school with their independent navigation during our study, students were in agreement with this view: "In school we're not allowed to join a chat room, we have to go to educational web sites and it has to be something that has to do with our project – they give us no time for chatting, and if I want music or if I want to chat I have to do it outside class time, I have to ask for permission and it absolutely has to be something for school, it can't be anything else" (S-18). Judging from their navigation habits when there is no teacher to control things, students tend to navigate in their favourite subjects, and these have little to do with education as the school sees it. In the navigation surveys, the percentage of academic topics covered was very low, compared to an 80 percent rating for musical themes. Without a teacher, without homework to do or without a test to worry about, children are no longer really in the school world when they are allowed to navigate independently at school.

It is in this sense, then, that we may reconsider the transformation of the school/world boundaries, or redefine the meaning of "inside/outside" school. What difference is there between navigating in a cyber café and navigating in school? Navigating the Internet in school does not imply, in principle, that the Internet is in the school. Rather, we could say that the Internet has introduced the "outside", that it has brought the "outside world" in, but no pedagogical plan has been articulated to define its educational nature. It is not a question, such as is generally posed in the school, of what kind of content is or is not considered educational. With the earlier audiovisual technology of television, much of its crisis had to do with the view that realizing its educational potential boiled down to producing educational television. Given the evident fact that children and teenagers learn more about ethics from the moral dilemmas facing a character in a drama, a soap opera, or a made-for-TV movie than from educational programmes about values, we need to reconsider whether content control is really the best way to take advantage of the Internet's pedagogical value. If we listen to the stories of the youngsters in the study, Internet technology is in many aspects the least "scholarly" experience these children have had. The Internet school is less a school and more "juvenile Internet". In other words, it has more to do with the outside world, with audiovisual codes, with the consumption of market symbols, with socializing with their peers and simply having fun. In other words, there is less administered knowledge, less tedious homework, less seriousness, less uniformity, less claim to infallibility. In the end, there is less effort, greater facility and more pleasure.

Judging from their more frequently observed navigation practices and their own stories and interviews, it is clear that for youngsters the Internet is

a pleasurable context. By contrast, the school has become a space that normally encourages sacrifice, rewards dedication and discipline, lauds efforts to overcome obstacles and regards learning as a difficult goal. The school long practised and gave legitimacy to the learning regime as an activity divorced from pleasure. Even the most hedonistic descriptions of school life look upon play as a "tool" whereby learning will be more effective and attractive, but still "difficult". The principle that every student has to memorize is that things that are worthwhile have a cost. The curriculum has been designed to administer increasing doses of difficulty. Revealing this Internet/school dynamic, as a kind of reflection of contradictory voices, one student said: "Before we had computers, when we had an assignment we had to go to the library and spend hours and hours going through books for a task that I can do in one hour with the Internet. The Internet has made my life a lot easier. My parents tell me sometimes that it encourages mediocrity. But when they were in school they had to spend a whole weekend finding information and reading it, while I simply look on the Internet, find it, copy it and it's done" (S-25).

When it is introduced to the classroom, the Internet produces ambiguous tension at the school/world frontier, tension that has begun to show up in the line taken by teachers and parents. Since this is a technology that arrived with tremendous pedagogical prestige and yet still is so little used and appropriated by adults in the school, the reaction it produces in them is ambiguous and changeable. For the school, accustomed to supervise and manage what is tangible, the "escape" that children experience through the windows of the Internet is something that is still too intangible to be regulated and controlled successfully. At most, the school can impose censorship based on a heteronomous image of the student: since he is incapable of governing himself, and since there is no learning structure that will allow him to do so, decisions must be taken for him.

"From prohibitions you can tell what people normally do – it's a way of drawing a picture of daily life," says a character in one of Umberto Eco's novels (1995: 80). The school bans games, pornographic pages, music and other amusements with the Internet and computers. From this it is easy to deduce what children do when they are allowed to navigate freely, or when the teacher is not looking: "At first", said one youth, "they told us we could go anywhere we want, as long as it was not pornography or Satanism, and then when we started to visit chat rooms what happened was they imposed a rule that said we could not go there and we could only visit educational sites, which meant of course no X-rated sites and such, but in fact it is the teacher who decides what is course-related, and what he says goes" (S-18). This story opens a further set of questions. On one hand, there is the issue of what happens when censorship is imposed – children come up with resistance strategies. According to one student, navigating outside school was "much better because we can surf freely, while in the classroom, when the teacher comes, we have to switch windows quickly with Alt-Tab" (S-18). In even the

most strictly controlled areas of the school, students develop mechanisms of resistance, and censorship over Internet content is no exception. As we shall see later, for young cybernauts, "prohibited" subjects are hard to avoid because they are so abundant and tempting on the Internet. Bypassing certain content poses a complex psychosocial challenge: not only is the prohibited object all the more seductive and enticing, but viewing it becomes a matter of group complicity and solidarity. A group plot to elude the teacher's control is easier than might be thought, not only because schools generally have or use no software to block access, but also because outwitting the censor becomes like a video game, a challenge to see who is the most skilled in getting around school restrictions. Finally, the generational difference in technological abilities plays in favour of the students, who swiftly learn or invent strategies for escaping the teacher's visual control.

With teachers and adults so intent on monitoring the content they access, concerned on one hand to fulfil the Internet's broad pedagogical promise and yet alarmed by all the imaginary perils they see it, the school has begun to encourage a split in the use of the Internet. The Internet is the least "scholarly" thing about school. When the school introduces the Internet with the knowledge control and management habits to which it is accustomed, the Internet comes to represent an object from the past, a library for doing homework, a huge database, or a boundless book that must be administered. The Internet comes to be represented as exclusively an information database. It has little association with communication, interaction or shared intentions. Around this form of appropriation there emerges a fundamental dichotomy with respect to the Internet. The Internet becomes a source of tension between "what the kids want to do and what they have to do": the homework Internet and the amusement Internet, the Internet from which homework can be lifted and the Internet that offers chat rooms, the Internet that is a chore and the Internet that is fun. One girl summed up her two-sided experience with the Internet: "The teacher came and said do this and that, and we started to do what we were told, although nobody wanted to; when we navigate alone, all I do is chat and chat and then it's fantastic because I get to know more people and customs" (S-5). This split encourages two possible dynamics with the Internet at school. In the first, the Internet, viewed as something aestheticizing, seductive, multicommunicative and entertaining, transfers its logic to the pedagogical dimension: it hypermedializes and diversifies the school. In the second dynamic, the Internet comes to be an experiment in control, divorced from pleasure and serving merely as a huge library. In this case, the Internet is inserted within the traditional school culture. The latest technology, then, can be made to behave like the most traditional of objects of the pedagogical world. The second dynamic would seem to be the more frequent, given the experiences and practices examined in this study. The first is not excluded, but it is less apparent in the youngsters. At times, the two intersect and reinforce each other, or produce tension. In any case, the dichotomy is there, and the Internet as a relational object, despite the school's declared intentions, is not yet a clearly pedagogical experience.

In place of the tension between what is educational and what is not, we are left with a problem that is more difficult to resolve – above all, if in general what the school is trying to control is access to advertising material that portrays the latest fashions over the Internet and which young cybernauts tend to explore. A quick glance will only reveal the juxtaposition of two social discourses: that of the school and that of advertising. Advertising, although understood today as a complex device that sets the stage for cultural interaction between the symbolic world and the economic world, between collective desires and the productive apparatus (Pérez Tornero 1998), is viewed by the school as nothing more than a vehicle for the alienation and manipulation of consumers. This way of looking at advertising is most evident in the instrumentalist view that the school has of television in particular and of the media in general. Sticking to the old paradigm[25] of the "all-powerful and manipulative" media versus the "passive and manipulable receptors", the school makes the message of advertising into an object of criticism, contempt and suspicion. Yet, despite that, advertising continues to infiltrate through the countless interstices of the school–media–youth relationship. Despite the school's declared opposition to advertising, its symbolic heart (i.e. the image) has penetrated and conquered the school world by different routes. Students have seized many of its messages and reinterpreted them in light of their own cultural structures, using them as spaces for self-representation. One youth said, "I really like the advertising slogan for Sprite – it says a lot. Even though what they're trying to sell is a brand, in fact it says a lot. The image is nothing – I can see a physically beautiful girl in the street, but she may be empty inside – so the image is nothing. Unless I know someone, I can't give a clear judgement on that person" (S-28). The representation of the advertising image in the school is ambiguous and tension-ridden. Its commercial message is viewed with suspicion, but at the same time its semantics is used extensively and rationally and treated as profound and vitally important.

In today's media culture, the image has become an omnipresent communication code (Jameson 1997). The image gives tangible meaning to social reality. With the overwhelming flow of visual signals through the media, reality can only be presented through visualization. Social and anthropological studies of the city have found that many of the most basic urban experiences, such as the concept of place and the collective feeling of belonging, are being mediated by the power of television (García Canclini 1995). Although visuality has been a growing force behind the construction of Western culture (Jenks 1995), it is with the surge of media images that its greatest symbolic protagonism and its anthropological power over urban life are generated. It has involved one of the most characteristic social phenomena in constructing today's sphere of communication, the intense and generalized deployment of aestheticization in the different communicative agents of society (Jameson 1997). Politics, sexuality, private life, the city, the economy, among many other fields, tend to be staged in an aestheticized way. Even wars, wherever

they occur, have become the object of direct broadcasts and careful media explanations, complete with graphics and typically cinematographic simulations in order to catch the viewer's attention. Technological devices, their design, their user interfaces and the organized activities they imply are obviously designed to be "enjoyed", and to be first and foremost "visually seductive". Of course, it is not only the media but social and political life as well that have reappropriated and dramatized this dynamic.

Socialized by aesthetic advertising through the media, youngsters find different lines of continuity and acceptance of digital technology in the school. With the Internet, its visual availability and its growing colonization through advertising, youngsters find a space that is very familiar to them. "In school", said one girl, "we have had access to the Internet in the library, and that is great, because with the Internet we have all that information at our fingertips, and it's really incredible, it's just divine, our work goes really well, super well, and when we present a job on the computer it looks really pretty, we can put in little cartoon figures, in Word, in Excel, we can give slide presentations, it's great to interact with technology and it helps me tremendously" S-27). This view, peculiar as it may be, crops up quite frequently in the arguments that children use about the power of digital technology. For many students, much of the Internet's value lies in its capacity to be a huge reservoir of graphics, illustrations and caricatures for making conventional schoolwork look better. Similarly, although they often complain about the number of "banners" on the Internet, some of them confess that one of the reasons for visiting and staying at the web site is the richness of its graphics, its visuality and the attractive advertising it offers.

Although it may seem merely a prosaic gesture, in fact it reveals the ambiguous nature of a paradoxical relationship between the media world, digital technology and the school. As we can see from the social representations and practical uses that children make of the Internet, introducing the Internet traces new lines of continuity and tension between various views of school culture and popular culture. The institution swings back and forth and, without wanting to, builds bridges to its environment while removing frontiers, which swiftly disappear through the escape windows of the Internet and the navigation practices of its young users. If this ambiguity is seen as a problem of competition between the school and its environment, it will not be readily resolved, especially since it involves confronting experiences that occur in the complex structures and dynamics of cultural life. On the other hand, if it is approached within the current framework for incorporating the Internet into the school, as part of the effort at renewing education, it will probably be easier to resolve, by making the possible relationships explicit more in terms of an alliance than of competition.

It is also essential to build within institutions an attitude that is sufficiently sensitive to the organizational, cultural and pedagogical changes that the Internet can mean for a school. The difficulty that can arise from "schoolifying" the Internet, under the current approaches described here, would imply losing

much of its educational potential. Similarly, reducing the possibilities of the Internet to a mere information mechanism is a questionable association. This is a difficult issue because, for the school, the debate over content-focused education is not new. If the Internet can do no more than provide access to content, however new and varied, the debate will get bogged down in arguments over the type of information that should be accessed. It is not that the question of content is useless or secondary, but rather that to regard it in this way ignores the possibilities of the Internet for generating relationships, cultural logics and communicative processes.

The avatars of the "hyper-reader"

The debate over the importance of content in schooling leads us inevitably to the problem of reading and writing in relation to incorporation of the Internet into the school. As can be deduced from our ethnographic work, reading skills among students are passing through a stage of crisis and transformation. Assessments of "academic skills" in various areas of schooling, including language, reveal a key problem in the city's public education. The results of these tests show very low success rates. Even more alarming results have been produced in national tests, where mathematics and language skills among the school population are clearly inadequate.

The traditional school has a central object that defines it: the book. School culture is book culture. The book has functioned as the object of knowledge. It concentrates the most valuable knowledge that the school can offer. But for the school, the book has a special function. It has become a cult object. It is static; it sets and preserves limits. From whatever viewpoint we choose, it is, and has been, the standard for evaluating the acquisition of school knowledge. The school as an institution has been supported in the appropriation, circulation and cult of the text. This has long been the space of certainty for teachers. It has guided their path and calmed their doubts. More than reading, it is the book itself that has defined the meaning of school life. The growing distance that separates youngsters from the world of book readers reveals a number of phenomena that in some cases contradict the explanation of reading deficiencies. The relationship with the media, just as with the new digital objects present in the classroom, allows us to see that the crisis in school book culture has to do less with the book and more with the relationship with reading that the school, through the book, insists on.

A reading crisis or a relational crisis?

For youngsters, the schoolbook is the symbol of a compulsory and unpleasant task. Even among those at a higher sociocultural level, reading is not a frequent practice. At school, the book becomes an imperative for learning. Those who do not read will be cut off from knowledge. Similarly, the book is an object of permanent pedagogical control. Students are tested on the basis of books

and their contents. Students look upon books as something with which they have an uneasy and disagreeable relationship. "I don't know why, but books bore me," said one boy. "I know there are some terrific books, but on the whole I say, what a drag!" (S-31). This feeling about books becomes even more critical because, through their control, children exercise little autonomy in organizing their own learning. The relationship of pedagogical control that books represent in the school produces in students less autonomy and more subordination. Students frequently feel that they would "like" to read a book until the time when they "have" to read it. All it takes is an order from the teacher assigning a book as a task to kill any desire to read it. We might ask, what would happen to book culture in a school where reading were not compulsory?

On the other hand, the experience of one young reader suggests that the crisis is less one of reading and more one of the way textbooks function in the school. "The only thing I read is gossip magazines, *Shock* for example, where they have chic girls in the latest fashions, or *Soho*, or magazines like that, worthless stuff, silly stuff, the kind of thing that you walk into a newsstand and pick up and start flipping through, there's no content, it's just junk, but it's the only thing we dare read, we don't even read it, we just flip through the pages" (S-14). A number of studies of lower-class reading habits suggest that identifying book reading as the only legitimate kind of reading tends to devalue other reading practices in the eyes of the readers themselves. There are clearly many interconnected reasons why children do not read, but one reason is that they do not identify themselves as readers when it comes to certain material. The crisis of the written word is not, then, a crisis of reading but rather a crisis of its relationship with the school. With the arrival of Internet technology, the picture becomes even more complicated and yet it helps us to understand more clearly that the crisis in reading habits refers more to a process of change in decodification rather than to any loss of a particular skill. As one student put it, "I think that just looking at a white page with black letters is a big bore, while the little characters that appear on the Internet screen with colour writing in all sizes, that can really catch your attention. After all, people only read what interests them, and then you have these little characters that pop up, where at least it's amusing, but you don't have to sit there reading line after line and then finding that you are lost and saying, hell, I didn't understand this, and having to read it all over again, since on the Internet you only go to stuff that's interesting and you don't have to sit there all alone reading page after page, you can be a little more relaxed" (S-14).

This story helps to explain several aspects. First, the aesthetic character that differentiates the printed word from hypertext on the Web. "Hyper-reading" on the Web is accompanied by various registers of decodification: diversity, interlinkages, the possibility of self-regulation, the self-construction of navigation routes – these are the most decisive features that allow children to experience a bond that is totally opposed to the book object. Youngsters feel a great familiarity with this new hypermedia format because they have

had prior training in the process of decoding with audiovisual media. Much of what young people do with the Internet involves using it as a kind of "televisual reading", i.e. treating it like television. This brings us back to the question of what reading means for youngsters. One of the advantages they find in the Internet compared to their reading experience is the nature of access. "The Internet is great", said one boy about his experience, "because for me it's a lot better than going to the library and consulting all those fat books, and then you don't find what you're looking for and you have to go back and stand in line with five other people and ask how do I get this" (S-27). Access means more than just facilitation. It has to do with the relationship with reading that is established in school culture: not only because training readers requires a lot of social support and cultural capital available in familiar and communal settings, but because the dynamics of education have made the book a symbol of a kind of school that is "not connected" and also because the written text has been represented to have a value quite different from that of the mass media. Evidence that there is alphanumeric decodification in "hyper-reading" can be seen in the fact that many children make a practice of downloading and printing material from the Internet so they can read it later.[26] This not only shows us how readers have redefined their habits with digital formats, but it also suggests that access to electronic reading is seen as quite different from book reading (not so much because of the kind of decodification as the context of reception). When they are on the Net, children no longer think of themselves as readers but as "navigators", "explorers" or "cybernauts". The "hyper-reader" see themselves as technologized; the same cinematographic imagination that goes with their social representations about technology gives them a new image of themselves that bears little relationship to the self-image they had when they were using printed books. With the Internet, children have fewer teachers imposing reading assignments and so it is easier for them to find points of escape, to plot their own routes and explore the Net at random. To a large extent, then, we may say that youngsters read via the Internet because they don't realize what they are doing.[27] Their own representation of reading as something boring does not jibe with the emotionally attractive and active experience of navigating the Web. Their devotion to chatting – textual chatting – also shows the vigorously active side that breaks down the reading/consumption paradigm and establishes that of textual productivity. The problem of what they are reading or how much they read and what kind of material they read is also an important aspect since, with the hypermedia formats of the Internet, not only does the relationship with the written medium change, but the representations of what young navigators find and produce in their new "hyper-reading-writing" spaces are redefined.

The book-centred school used to teach about a "distant world", presented as remote and incomprehensible. From the perspective of these youngsters, Internet technology has reinvented the notion of space, allowing children to imagine that the most distant places and cultures can now be accessed more

readily with a simple click of the mouse than with all the (often fruitless) effort involved in going to a traditional library for information. External reality, "the world of others", was, in the textual style of the school, a kind of knowledge that was narrated and retold in solemn, terse, precise and uniform formats. It is the kingdom of the sacred and infallible book, which for kids of this pleasure-seeking generation is a synonym for boredom. A book narrator, omniscient and impersonal, with a language in which the narrator himself disappears, talks about the geographic features of the Pelopennesus or about Hindu philosophy. With the Internet, impersonal intermediaries tend to disappear and give way to protagonists in the eyes of youngsters. Speaking out loud in hypermedia register, the colonialists lament the domineering and bloody-minded attitude of their predecessors, the nationalists talk proudly and fondly of their pre-Hispanic wealth and Orientals tell their own version of history. And although children spend less time on geography, science and history and more on horoscopes and sports, hearing the actors' voices and seeing their bodies is an experience that is invaluable for distinguishing between how they learn over the Internet and how they learn in the school of books. As one student put it, "I can look at photographs on the Internet, I can see videos, I can listen to sounds, I can do a lot of things, I can get written information from people who have lived through these situations and that makes it very easy for me because nearly everything is there" (S-23).

Pirates of the old texts

As we have seen, the Internet behaves in different ways within the school. Sometimes it is inside, with its young navigators, sometimes it is outside, captivating them and taking them beyond the bounds of the school. The kinds of "schoolification" that happen over the Internet produce "traditional" uses of the new, expressive formats of the Web. In a school focused on learning from texts, many youngsters have developed a negative image of books. And since the book, despite their resistance, is a fact of daily life at school, children have also learned to put up with what they cannot avoid. A sign of this is the way they copy fragments of books and hand them in, unchanged, to the teacher as their homework. "Research", as students normally call it, is nothing more than plagiarizing from various books. To a large extent, the book-centred approach of their teachers has made these children "turn off" from the wisdom to be found in books. In this respect, one boy told us, "When the teacher assigns us some project for research, and we just talk about what we think of the topic, the teacher doesn't like that at all because for him the only thing that matters is what's in a book and not what we think about the topic" (S-22).

In the book-oriented culture of the traditional school, the most difficult thing was to find a book to copy. Now, from the viewpoint of those who see the Internet as merely a gigantic library, copying is an easy matter. "I think", said one girl, "that the Internet offers a lot of facilities, but that depends on what you want to make of it. If I want to be lazy, I just download something" (S-23).

Teachers also recognize this phenomenon: "For example," said one teacher, "a student may be working on a written assignment and he will go and copy something and hand it in, but if you ask him anything about the project he has no idea at all" (T-36). Although the Internet may occasionally inspire feelings of guilt (which youngsters overcome readily enough), it is becoming for youngsters a synonym for the book, offering knowledge that they simply have to copy and paste, but which they do not try to understand, not only because they don't want to but because they feel they cannot. Because they have problems with independent interpretation, plagiarizing books becomes for them a kind of practice where knowledge is always "someone else's knowledge". And since this results in infallible knowledge, a youngster who copies from the "Internet book" becomes almost paradoxically a pirate of old texts.

Up to this point, we have been examining some of the redefinitions that the Internet introduces through its hypermedia structures into reading comprehension and decodification. The relationship with traditional reading has been substantially modified and different practices are emerging, together with the notion of the "hyper-reader" navigator. Yet this is not to say that youngsters' experience with the Internet is giving rise to a generation of more critical and better-trained readers and decodifiers. We do not have enough information to say that – indeed, taking our observations of navigating youngsters, we find considerable continuity between media consumption and cybernautic practices which would seem, in principle, to point to the creation, not of more critical readers, but rather of more hyperactive consumers. The fact that they may be dissatisfied with what they find in the media, that they may be turned off by excessive advertising over the Web, or that they are disgusted with "consumerism" does not imply the development of more analytical, thoughtful and active readers in the face of advertising devices and the big media and communication corporations. This is not to say, of course, that youngsters' relationship with this space makes them more docile or submissive. On the contrary, whatever the intent of the output of these big communication companies, we find in the culture of students, and in the school, major currents of "resignification" of the symbolic content of the mass media and digital technologies.

The mediation of the teacher: proximity and distance

The Internet is beginning to produce a particular redefinition of the pedagogical relationship with knowledge in the culture of the traditional school. With a technology that offers amusement, the Internet gives youngsters the possibility of learning without books. Learning with the Internet, even if it involves reading what is there, is still learning without books. This method of learning is deeply disturbing to teachers because it has a considerable impact on the identity of the book-oriented school. One teacher said, "The kids don't even use the library . . . they were not raised in a book culture . . .

they find it very difficult to look for information, to go to libraries, they don't know how to handle them, they don't know how to do research" (T-34). For teachers trained in book-based teaching and pedagogy, these new dynamics represent a threat to their educational competence. In the first place, many of them are unable to see the pedagogical meaning of the Internet, or of computer culture in general.

In this respect, a cardinal aspect that we observed in our study was the generational difference between students and their teachers. Although many of the low-income students in the public schools have no direct, intense or early exposure to digital technology, they were born into a society where computers are a naturalized representation associated with youth. However novel the computer may seem to youngsters who come to it later, they can relate to it much better than can many adults. The situation is different for teachers: the computer appeared only when many of them were adults, when they were already thoroughly steeped in the book-oriented school and had little exposure to technology. For nearly all of their school life, they learned from linear texts and their relationship with the media, the technology closest at hand although outside the school, was mediated by the paradigm that discounted their educational possibilities. Those who were exposed to the computer in the early days of its development did not find it a gratifying experience because the interface with it was so difficult and unsatisfying to handle. This probably explains much of their unfamiliarity and discomfort with computer technology. For many teachers, this generational difference is clear. One of them summed it up this way: "These kids are living in the heyday of the computer; they were born at the same time as this technological revolution. When I started to fool around with my first computer, I was already 35; and here are these kids in grade 8, only 13 or 14 years old, and they are already navigating" (T-36).

Fears and resistances

The generational difference in technological skills induces tension in teachers. In the first place, youngsters see themselves in their own self-representations as "explorers" of their own lives, and this sets them apart from adults. The difference becomes clear in relation to digital technology. "The teachers are stuck in a rut, and I don't think they ever look back to when they were kids, when they too needed to see things differently, they are too serious about things and they won't admit that someone might need to see things differently" (S-27). The search for difference and the pursuit of novelty are codes that youngsters adopt as distinctive trademarks of their identity. Their great affinity for the Internet lies in the fact that it offers a wide spectrum of objects and up-to-date symbols and things that can be "explored". In this juvenile representation, the Internet represents change and novelty and it is precisely these qualities that they find lacking in adults, whom they see as "stuck in a rut".

For the teachers, nearly all of whom are at least twice as old as their students, this difference sparks an initial fear: the fear of losing control, the fear that technology is not their terrain, and that they will be overtaken in terms of knowledge. It is the fear of being shunted aside. In a school built on a scheme of someone who knows and someone who does not know, this is sufficient reason for teachers to keep their distance, particularly because they see it as an attack on their identity and on the role that the school has traditionally assigned to the teacher. Moreover, since technology is frequently associated with youth (in the media and among the kids themselves), many adults feel that venturing into technology means losing "control". Similarly, the representation of technology as subject to constant renewal generates significant resistance in the teaching culture. Although the teaching body itself may have doubts about it, pedagogy is hardly a field of constant innovation – youngsters are much more likely to have had a conservative educational experience than an unconventional one. It is not easy to reconcile conservative pedagogy with an object that bears the social stamp of invention and uncertainty.

On the other hand, the collective representation that circulates over the Internet occasionally introduces frightening images into the social scene. "Adults look at computers in a certain way, fearfully," said one youth, "because the media tells us every day about some new fraud, some new virus, some X-rated page, and so on, and there are a lot of scary things on the Internet" (S-33). Seen in this way, as the unruly offspring of television, full of dangers and strewn with unsuspected traps, the Internet becomes something to be controlled, to be censored and to be handled with caution. It is a common psychosocial reaction to the unknown to feel an emotional and cognitive void that is generally filled with the most negative images available. This polarized representation of a cold, dehumanizing, dangerous technology that will "conquer the human species" is one of the reservoirs of the popular imagination that provides the most fuel for these ways of seeing the Internet.

The archaic predigital technology

As a technology, the Internet was preceded in the history of the school by the introduction of different media. In the days before the Internet, the audiovisual media, primarily television, created great expectations about the impact they could have on school culture. If we examine the technological history of the school prior to the Internet, we see a picture of technological uncertainty: "Educational technologies," said one teacher, "which were the first to be brought into the school, were never assimilated by the school itself, not even in terms of infrastructure, and certainly not from the viewpoint of teaching. Now they have brought us the computer, the Internet. Without knowing how to use the movie language of television or video, nobody knows it, nobody has any interest in it, they don't use it and they don't care about it. People continue with the traditional classroom approach, expository, verbalist,

or they exchange it for constructivist practices such as workshops"(T-4). Generally speaking, we found in our study that the school is not technologically well-equipped and that what it has is poorly maintained. Despite a significant institutional effort, the school is far from achieving an adequate level of infrastructure. Moreover, quite apart from material shortages, the school has made little progress at incorporating the media into its teaching approach or into any organized educational philosophy. Attempts by the teachers to explore the media have not met with great success. In part, this is because their professional training was lacking in this respect, in part because the culture of the book-oriented school has stood in opposition to the mass media. For the school, the media have had a negative image: they have been viewed as manipulative, as "anti-educational", as discouraging sound reading habits and as producing violence in student behaviour.

Despite the sound commercial strategy used to proclaim the educational benefits of the Internet, many teachers and adults in the education community see it as a synonym for "another massive object" that carries with it dangers and creates negative habits that are bad for school performance and the sociability of students. One student told us: "Many people think that because a kid has the Internet he won't go out, he won't go to the library, they say you just give him a task and he will send it back by e-mail and he will never leave the house, he will just stay there hibernating in front of the computer, and they think that he's going to become totally dependent on the computer and that he may even become addicted, and this is what scares them" (S-33). As the depository of new fears about "the foibles of youth", the Internet becomes a place of suspicion that must be controlled. This is not only because it "makes things easier" for students, something that is severely frowned upon in a school that prizes hard work, but also because the technology is also seen as something that dehumanizes, isolates and individualizes the student. Ignoring the overwhelming tendency to seek relationships through chat rooms, adults and teachers imagine that young cybernauts have broken with the social bonds that keep them human and have become part of the machine.

Under current circumstances, for many of the institutions we studied, the Internet has arrived in a technologically archaic setting. Although we should not think that the media must be introduced in sequence, starting with the book, moving on to television and finally arriving at the Internet, it is clear that the preceding technologies have not created a healthy and appropriate context for receiving the Internet. It could be that the best strategy is to generate a communicative circuit in which the Internet can be introduced. The audiovisual media can still do much to improve the school pedagogically and, in association with digital technologies, their potential should increase significantly: perhaps, then, the best way of using the Internet would be to do so through a "technological network of various media". For developing countries, the cost of doing this is prohibitive, but even with the low level of equipment available in the schools of countries like ours it is possible to imagine many other possibilities for using the Internet together with the media

available. It is worth noting that none of the institutions studied had any sense, technological or pedagogical, of the linkages between technologies. In a way, even though the Internet is recognized as the "medium of all media", it is still seen in the school as a distinct communication or information tool, unrelated to its predecessors in the technological landscape.

Teachers and the Internet: inconsistency and diversity

Although our research did not focus on the theme of teaching culture in relation to the technology, the teacher's role as mediator, remote or visible, turned out to be a fundamental element for interpreting the processes that the Internet introduces in the lives of young students. When it comes to understanding, handling and using the Internet, there are among the teachers many different attitudes and positions. Some of these are more widespread than others, none of them are stable, and there may be intersections or mutations between several of them. Our classification is provisional, but it can help us to visualize the diversity of reactions to digital technology in the school. In the first place, we shall consider the results of an online survey of teachers, some of whom belonged to the target institutions.

Statistical paradoxes

Our findings led to a paradoxical conclusion about these teachers, in the sense that we expected them to take a higher profile in introducing the Internet into the school. The survey was answered by 34 teachers, evenly distributed by gender, with an average age of 35 years. We may assume that most of the teachers in this survey were familiar with the Internet and used it at least at an intermediate level. Most of them were teaching computer science and language subjects. These teachers scored high in handling the computer, and yet the variety of activities and the diversity of programs they used were not substantially different from those of any average user. Most of these teachers were users rather than producers of software, and very few reported engaging in programming work or using multimedia tools. For this group, the principal difficulty in introducing the Internet to the school was the negative attitude of their colleagues with respect to computer technology.

In terms of usage, these teachers shared many of the habits of their students. They distinctly preferred chat rooms and e-mail to other Internet resources, and very few of them had a web page. Nearly 60 percent had a computer at home, and half of these had Internet connection; the others, those who reported no access at home, gave the cost of service as the principal reason. With more than four years of Internet use, and with the high ranking they assigned to its educational importance, it was surprising that only 20 percent were using the Internet for teaching and that most of them (66 percent) should say that they had no pedagogical plans for the Internet. We were also

surprised to find that of these teachers, who had the most experience in working with the Internet in school, only 6 percent were using the Internet to seek information on education. Even fewer, 2 percent, reported exploring the Web for information resources.

Although the survey could be improved as a tool, both in terms of the construction of the sample and its applicability and technical construction, its results are an important aid in understanding some of the difficulties with the Internet that we observed in the school culture.

A provisional typology

The following typology has been constructed from our field observations and from the narratives of students and teachers. It is not an exhaustive classification since there may well be other possible types. We have tried to focus on those characteristics of teachers that could be explored directly. On the other hand, each type is more a metaphor than a uniform category.

1. The transient passenger

"Using a local network," said one teacher, "they provided literacy training for the teachers, for all of us, and it lasted about a year, during which the teachers could come and work alone in the computer room. They started giving courses on MS Office, computer use, everything to do with informatics, all the basics for making the computer useful in our daily work. There was much enthusiasm initially, and great expectations, yet after a while attendance dropped off and finally no one came" (T-36).

Computer technologies, presented and accepted as something "revolutionary" through campaigns for "digital literacy", create excessive expectations in the schools. Even if it makes no claims to the status, teachers see the computer as a "teaching panacea". Yet, very soon, various factors conspire to work against this. The courses are reduced to formal and technical rather than pedagogical training. Moreover, organizational and professional tensions emerge and affect the process of teacher training. Despite the good intentions of the city's education authorities, there are crucial shortcomings that quickly discourage the teachers. Despite government concern about informatics, there have been some enormous failures.[28]

Such failures tend to generate the prototype of a teacher who is easily excited by the technology but who, without any visible, concrete and creative applications to educational practice, soon becomes unable to relate actively and structurally to digital technology as a tool. These teachers speak positively about the use of the Internet, but they quickly forget the intentions and, as transient passengers, they get off halfway down the road and return to their magisterial and inactive teaching habits. At best, they may complete the journey, but it will be very short.

2. The teacher-librarian

We have already referred to this type of teacher. He sees the Internet exclusively as an enormous computerized book bank. For these teachers, the Internet is the best tool for "documentation", perfect for preparing long exercises to be completed on paper. For them, the computer is nothing more than a sophisticated paperless typewriter or a cheap and very attractive slide projector. And although they praise the virtues of the Net, their teaching approach is merely a traditional variant with a modern tool. These teachers may well have been "transient passengers" at one time; and although they have not abandoned the digital train ride, they are moving at a slow pace in the most conventional wagon of Internet pedagogy.

3. The teacher who thinks computers bite

The generational differences to which we have alluded in terms of the way certain teachers relate to the Internet, combined with the teacher training process itself (with little appropriation of digital technologies), have produced the image of a teacher with little interest in digital culture. For this type of teacher, the computer is a complicated and sometimes magical thing that is extremely difficult to handle. These teachers frequently point to the "marvels" of the digital world as further proof that the computer is inaccessible and unintelligible. Some of these teachers betray their fear of digital culture through defiant rejection, arguing that the computer is an alienating object. On occasion, they will pin the blame on the Internet for the poor performance and "intellectual laziness" of their students. Their relationship with computers usually progresses from fear to technophobia: an object that creates fear is an object to be rejected.

A clear example of this type of teacher was described in one interview: "A characteristic of the official teacher is that he is very apathetic to change . . . the greatest problem in public schools is a negative attitude and even fear on the part of teachers. For example, I have here two computers that are available whenever they want, but very few come for them" (T-10).

4. The "techno-apologist" teacher

This type of teacher is midway between the pedagogue and the technophile. He may be enthusiastic about all kinds of technology, proclaim them publicly, justify them and, in a haphazard way, try them out in his teaching practices. Generally, he tends to focus his interest on the technical dimension of the tool. His goal is to have the equipment in his classroom. Although he does not view computers in pedagogical terms, he may innovate with them and his efforts may be successful, more because of their novelty and his own enthusiasm than for their consistency with any structured teaching approach or any concern for sustainable development. Since his educational intentions are focused more on objects than on processes, this type of teacher is usually abreast with the latest developments in technology but not with those in pedagogy.

5. The teacher of the oral tradition

This is one of the most common teacher types found in the schools. He represents, par excellence, the magisterial classroom, the blackboard, oral performance and, of course, the textbook. This teacher is usually viewed as something of an anachronism by his students, who see him as representing the survival of an outdated school culture. This type of teacher is not bothered by technology and the Internet, he is not afraid of them and he does not disparage them – they are simply a dimension that does not exist in his pedagogical world.

One student, who seemed sufficiently informed to be able to assess the technological abilities of his teachers, referred to several types, including the teacher of the oral tradition: "The trigonometry teacher wants nothing to do with technology, he uses only the blackboard and chalk, we don't understand anything; on the other hand, the chemistry teacher brings slides to class and we understand her very well because she knows how to make us understand her; the physics teacher brings films, but the trig teacher is totally out of date" (S-22).

6. The expectant teacher

This type, together with the next one, would seem to be one of the most promising in defining the Internet's future in the school. It embraces those teachers who, although they have not worked with the Internet, have high expectations for it. Through the media, institutions and their own explorations, their curiosity has been piqued and their imagination awakened. This type of teacher is the one that needs the most attention, since any disappointment in their growing but still-undefined interest would turn them into sceptics or even technophobes. It is usually, but not always, the younger teachers who have the most open minds, not only towards digital technology but towards the possibilities of pedagogical renewal in general.

7. The ideal: the "suicide" teacher

"In the future," said one teacher, "my role as a computer science teacher will have to disappear, it will have to become that of a facilitator for involving other teachers and resolving teaching problems – the teacher as such will disappear; I can see that I will have to disappear."

This type of teacher has a refreshing attitude to digital technology. He tends to understand that his goal must be rethought. He accepts that technologies like the Internet will result in less teaching and more learning. Aware of his students' technological skills, this teacher encourages them to collaborate and explore. He understands digital technology as a means and not an end, and he is more concerned with pedagogical problems than with technical problems. He is in effect "suicidal": he will kill off the traditional teacher inside him to give way to a new one, less bossy and more collaborative, less "teacher" and more "learner". He will be working in a school where progressively less is being taught and more is being learned.

Horizontal context: is there life after the chat room?

"At one time," said one teacher, "they allowed us to chat in school. But then there was a revolt; the girls became addicted, they broke the window in the door to the Internet room where there were 20 computers, all that the school had. So there was no more access. The children became Internet addicts. At lunchtime they had access to the room and they could work on different things. There was a time when they were allowed to chat, but then they became addicted and the room was no longer open when it should be; they put locks on it and you had to have a card to open the door. One day they broke a key in the lock because so many girls were trying to get in, and they were so excited that they broke a window. Then we said, no more computer room, and the room was closed for about three months" (T-23).

When we began our extramural navigation sessions during this research, there were two types of children: those who chatted regularly and those who did not. The first group, who spent more time on the Internet on average, served as evangelists and quickly initiated their classmates to the pleasures of real-time typed conversation. Once they were all in the same setting, after a few sessions it was hard to tell which of these two groups was spending more of its computer time in chatting. Suffice it to say that, for most users in this study, chatting was what they spent the most time on, after music (although their access was often limited by teacher control at school). Those who had a computer at home, the minority, were used to chatting. Whether through enthusiasm, curiosity, boredom or a fighting spirit, the children believed that the chat room was "a pleasure trap" from which they could not, and did not want to, escape. Once they were aware of the fun to be had, the relationships they could establish, the youngsters could not imagine any other resource that could connect them so effectively to others. And if that resource were to disappear, through the vicissitudes of technology or some lethal virus, many of these children would have trouble conceiving of life after the chat room.

Because this habit is so ingrained in young cybernauts, we offer below an ethnographically documented approximation to some of the main dynamics, structures and communicative rituals that the participants in this study exhibited in Internet chatting.

The "hypersociality" of digital tribes

Belonging to different groups is a social trend of modern urban life, something that Maffesoli (1990) has called "neo-tribalism". This differs from conventional tribalism in the fluidity and instability that characterize the makeup of its groups. Affective experience, the level of contact and the sense of belonging are the constituent elements of the new tribes. Each tribe constructs an "aesthetic ambience", i.e. an internally shared way of feeling. This new tribalism is expressed in the multiplicity of groupings that are produced in daily life and it is woven with symbols from a great variety of cultural

backgrounds. As Maffesoli says, "What characterizes our age is precisely the flexible intertwining of the multiplicity of circles whose articulation defines sociality" (1990: 143). The dispersion, segmentation and fragmentation of urban life produces, under various contexts, the establishment of a multiplicity of shared spaces. One youngster interviewed put it this way: "You can catalogue things in several ways. You can catalogue classmates and friends in the school. In our course there are more classmates than friends . . . there are also other spaces, what we call *roscas* or cliques. There is a little clique of repeaters. They don't mingle much with us. Or there is a little group that is lagging behind in the course . . . they tend to look out for each other" (S-19).

With surprising frequency, youngsters participate in multiple symbolic spaces. They are used to shifting from one context to another, from one identity to another, from one time to another, from one chat room to another. To belong to a symbolic space is, in a sense, to be incongruent with any other of what used to be or still are symbolic spaces of belonging. Belonging to one reference group does not mean breaking with another group, but rather mixing and combining the meaning of each. With respect to a reference group, "the coefficient of belonging is not absolute, and anyone can participate in a multiplicity of groups" (Maffesoli 1990: 251). Groups are understood here as symbolic complexes that may occur in various everyday settings, including the Internet. The new tribalism of youth, superimposed over the Internet, produces a mosaic of cultural voices, of supportive encounters and conceptual relations. Each tribe establishes itself within a specific territory, assumes a role and wagers its "cultural capital" on it as a sign of differentiation and identity.[29] With this "neo-tribal" perspective, the concept of what is collective about the Internet becomes more open and unstable. What young navigators have "in common," what their unity rests on, is more a set of shared intentions and symbols than the existence of any so-called "youth" group. The common element that they seek and offer over the Internet is more a multiple and changing object than a solid and tangible legacy.

In the chat room, youngsters are constantly reestablishing their "affective contracts" with the symbolic group to which they claim to belong. Daily life is a favourite emotional setting for youthful tribalism, whereby they surf and talk about music, singers, sports and horoscopes. With these themes they build "niches of recognition" for contacting each other, for reaching out and touching each other, with the "symbolic tactility" of the Internet because, as Maffesoli (1992) says, we are living in an era of tactility where everything urges us to proximity and to contact – hence the importance of the festive and the aesthetic as identifying signs in youngsters' conversations in their chat rooms. To the extent that they are shared forms, they become bonds for establishing relationships with others. In the chat room, children tend to seek each other out through a primordial affective tautology: "because" *porque sí*. For youngsters, the social bond is constructed through affectiveness, which can function as a strong bonding agent but also, of course, depending on the nature and intention of the relationship, as a trigger for the "pitched battles" that often break out in chat rooms over the Internet.

What kind of life, what kind of experience must a youngster have had for an event of anonymous communion in the chat room to be so attractive? The chat room becomes for youngsters the place where they can act out many of their dreams and imaginings, something they find very special; but this perception is possible only because the chat room generates an internal relational dynamic such that one of the main effects is to produce an emotional openness to their interpersonal relations and to their subjective world – a subjectivity that breaks through and shows a youngster an enormous and unexplored potential within his internal world. As one girl put it, "In the chat room we can do things that we could never do face-to-face . . . . You can go half crazy, at least that's what happens to me, I go on chatting like a fool, I say things that I could never say in public, like we get all emotional, we can drag out things from inside ourselves that we would never display to the whole world" (S-23).

The emergence of subjective experiences comes in a sudden eruption. This would seem to suggest the emergence of a "contained subjectivity", which becomes visible because a youngster finds two basic conditions that allow it: an affective bond with others and a place where he does not feel censored. His subjective experience in the chat room becomes a menu of possibilities through which he can show "what he is and what he wants to be". An anonymous space emerges that offers a variety of opportunities for identity, as a virtual experience without censorship, to reveal itself. In this respect, the chat room becomes a place for the youngster's "internal" exploration. This exploration in turn leads to the discovery of a "youth identity", an identity that relates to "what we kids like", where enjoyment tends to function as an aesthetic criterion for saying who one is; a space of "aesthetic identity" with which youth defines itself as such. After two or three hours on the Internet, one boy said, "We were chatting with a Mexican girl . . . and things clicked, we found that the things she likes are the same things that I like, the rumba, music, discotheques and such, and then we got into a real chat" (S-10).

The chat room, then, presents itself as a "menu of aesthetic experiences", a place for expressing pleasure, where there are options for sensitivity, where there is appreciable cultural and symbolic capital available, the product of shared experience in audiovisual consumption, in the symbols of globalization and the cultural industries. Of course, for people with other cultural heritages and different expectations, the chat room is likely to contain quite a different symbolic capital, with a different scale of emphasis. Nevertheless, for most of the youngsters in this study, the experience offered by this Internet resource represents an attractive menu of symbolic possibilities for exploring subjectivity and constructing social expressions of their identities. The tribal feelings, the identary experiences, the affectively charged language and the proximity that children experience with each other are associated with a practice that is just as relevant: the representation of the chat room as a broad space of relationships. "In the chat room we are more at ease, everyone is willing to recognize everyone else, something that does not happen in the street" (S-18).

Because they see it as crucially different from the other spaces, these youngsters are always eager to enter into a relationship, to get to know new tribal spaces and different options for relating to each other. Even in the most esoteric chat groups, there is always someone willing to make contact. The most popular sites that children visit at any time of day, or even early in the morning if they have a computer at home, tend to be peopled by children seeking or offering a partner. "No one can be lonely on the Internet", and this is something of great value for children who are tremendously eager to make contact. As one boy said, "In the chat room it's easy because there are a lot of people you can talk with, we can have groups of 30 or even 40 people and then we can strike up a conversation with anyone" (S-13). Under different circumstances, the structure of contact, the social filters and the ritualism of personal interaction would make it much more difficult to do what they do in the chat room: to enter into a relationship with each other without any preliminaries or excuses.

The promise of "an abundance of relationships" makes the chat room a prime setting for revealing the neo-tribal nature of youth. Yet the hypersociality of youngsters reveals itself even outside the Internet, although in relation to it. Among the rituals of computer use is the chat group: "It's more fun to chat in a group", said one girl, "because in the group you can imagine saying more things. If someone asks how things are going in the country, you're not going to lie. And the other person will understand and think that makes sense. It's terrific!" (S-23). The physical placement of computers in the schools fosters this kind of collective navigation. Whether for engaging in verbal battles or for winning someone over to the group, children tend to de-individualize use of the terminal – not only because they want to but because there are usually at least three students for each computer, and more in some schools. As well, as part of their tribal behaviour, children are used to grouping together to "plug themselves in" simultaneously to various objects of the "media circuit" (radio, television, computer). Music or televised sports events are a good opportunity for doing this: "Since the game was to take place that morning," said one boy, "we brought a television set and hooked it up in the classroom and we sat there watching the game and at the same time chatting with children in Bolivia, dumping on the Peruvians" (S-18). These neo-tribal encounters via technology make clear the strength and ease of circulation that exists in the mass-media communication structures. This in itself reveals the daily interrelationship that occurs over what we might call the "techno-communicational macro-net", and it shows how the Internet is not only displacing the other media but allying itself with them to play a more effective role within the multicultural entertainment business.

The rituals of online interaction

In conventional daily life, encounters between individuals are usually mediated by different rules of interaction. Psychosocial research (Moya 1994)

has identified what happens in the first moments of contact between strangers. The first reaction that serves to identify the other person for us involves the emotional interpretation of his state of mind. Gradually we configure a profile of that person, using available information (appearance, intonation, attractiveness, etc.). Next we will make a "causal attribution", i.e. we will attribute intent to the other person. Depending on our identification of the cause (politeness, hostility, deception, etc.), we will respond in different ways. The entire process allows us to configure the scheme of thinking within which we will classify the other person with all the information that we judge, on the basis of our own experience or knowledge, to be most relevant. There are many such schemes that every person adopts for situations, individuals and feelings under different circumstances. The essential point in the process of relating to another person is that we are always interpreting and, on that basis, predicting possible courses of social action and, in general, we understand the other person as a subject of intentionality. With what we know of affectiveness, intentions and behaviour, we interpret the other person by analogy to ourselves. This was clear in the way one youth imagined his chat partner: "What I always imagine is that the person I'm chatting with is right in front of me, in the same situation as mine" (S-20).

This process reveals to us a complex map in the interactions of face-to-face encounters. When it comes to relationships in Internet chat rooms, there are important similarities and differences in the way the interaction is ritualized. Our perception of other individuals in the chat room is based on indicators. We interpret others through their written marks and we then draw our own conclusions, as we would in guessing that a truck has passed by because there are tyre marks in the snow, its "footprints", except that on the Internet we have real-time footprints: we interpret them at the same time as they are produced, and we are aware that we are producing footprints in the same way.

Among the activities attracting the youngsters in this study, chatting was well in the lead. Consistent with the image of the chat room as a great virtual field for cultivating their "hypersociality", youngsters engaged there in a ritual of interaction that was frequently the same among different groups of navigators in the schools studied. We can identify a structure of interaction within the chat room that resembles a labyrinth of options, where in moving from one level to the next we pass through a kind of filter that allows us to decide the next step in the conversation. The first point of decision is the selection of the chat room. The most popular ones are in Spanish and are found on commercial web pages. Children will be aware of these addresses through their friends, or through radio or television tips. These children are not great readers of the press and, apart from "reading" the city's bulletin boards, they never reported visiting a site because of printed advertisements. Having made their choice, they go to the site – and among the topics explored, they opt nearly always for the same thing: love or romance.

In contrast to other social spaces, where acquiring communication skills is a long and laborious process, the chat room is a place where even the least experienced can quickly learn the keys to the ritual of interaction. Once inside, the children start to use an interactive repertory with which they are very familiar. As one student said, referring to his feelings in the chat room, "It's really refreshing because I already know what they're going to ask and I know more or less what I am going to answer, I have a stereotype of what we're going to say, what questions I will have to answer: How old are you? What's your name? What are you like?" (S-18).

The chat room is like the Golem of Borges: "In the letters of rose is the rose and all the Nile in the word Nile." The first indicator that the other person gives of himself, the footprint that defines his identity, is his name, his nickname. Through it, youngsters reveal a first mark of identity that they want to communicate. When it came to selecting a nickname in a chat session, one girl said: "I believe that it goes along with everyone's personality; for example, if I call myself "Ugly Betty",[30] I'll be looking for a Pancratius or something like that, I like that name, my chat partner's name would be something modern" (S-10). Borrowing the names of popular personalities, movie stars, cartoon figures or sports heroes, children try to economize in their language so that communication of the identity they want to portray is as condensed and brief as possible. Besides being a symbolic footprint, their nickname contains essential information for establishing interaction: their sex. If their gender cannot be readily identified, this will evoke a negative or suspicious reaction. On this point, one student said: "What happens is that in the chat room they can use a name, well let's say a man is writing and he uses a girl's name, and then you get confused and the conversation goes on, for example they use pseudonyms in the chat room, like Crave, and you don't know whether that's a boy or girl, you have no idea" (S-10). In our observations and interviews, very few youngsters reported chatting with people of the same sex. Boys and girls alike preferred to establish heterosexual relations, which is understandable if we consider that romance is one of the most popular topics among our focus groups.

Once we are through this naming filter, we come to a radical selection criterion, which is age. This is generally the first question, sometimes even before the greeting. Many children, when entering the public space of the chat room, throw out questions such as "Is there anyone here under 14?" "I'm looking for a girl of 15", or simply "Hi to every guy who's 16". Boys and girls both use age as an initial selection factor. Most of the time the relational range is one or two years, maintaining the cultural tradition that matches younger girls with older boys – but only slightly older, in chat rooms. There are of course exceptions of various kinds. One boy said, "Once this funny thing happened, we were talking with a lady who was 40 years old and as soon as we said we were 16 she said bye-bye and she cut us off" (S-18). In some cases reported by teenaged boys, the relationship with adults is viewed

pragmatically as adding to an "affective database" of persons who have the experience to "instruct". As one of them put it, "When we talk with an adult, we talk about work, about what we're doing, what we're studying, what we like, why we like people, and such things" (S-10). Once they have established gender and age, the children proceed to strike up a conversation. In many cases, more often involving girls talking to boys than vice versa, they ask whether the other person is married and confess their own marital status. The answer to this question seldom varies: girls and boys tend to say that they have no boyfriend or girlfriend and no commitments or that they have terminated or are breaking off a relationship. In terms of what we know about the participants, however, this was far from true in many cases.

For methodological and technical reasons, we were not able to observe in-depth and systematically the content and progress of conversations, especially since once they got into the chat room most users engaged in private conversations. Once they are through the brief and fleeting filter of the above decisions, they launch the conversation with a "ground reconnaissance" exercise of topics, seeking similarities and compatibilities. Questions such as "What do you like?", seeking shared symbols, or "What are you studying?", looking for common school interests, are used to assess whether the potential partner shares certain spaces that are vital to youth culture.

Similarity or difference of interests provides a defining thematic criterion for continuing the conversation. Although they may talk about love or war, the fact is that most youngsters use a highly exclusive criterion that we might call the "amusement rule". Given youngsters' representation of digital technologies as a place for fun, chat rooms are unlikely to admit any topics that are not "amusing". When asked why they liked to chat, the typical response was, in one boy's words, "We chat because it's fun just to talk about things, not about the state of the country, for God's sake. There are specialized chat rooms, of course, but to look for them or create them is, like, really boring . . . the very commercial chat rooms are only good for amusement, nothing more" (S-10). With apologies to Postman (1986), then, we may say that in the chat room the rule is "have fun or die".

There is a great diversity of topics, of course, but those that are considered "serious" are banned from the chat room. This does not mean that there can be no serious or in-depth chat about an amusing topic. "One of my friends is always carrying on in a style that makes the subject exciting and fun" (S-18). Yet it is the social character of the dialogue that typifies chat topics. Love (or its want), pleasures and hobbies, the meaning of identity and of life will crop up in fragmented and interwoven patterns in the course of a wandering dialogue. Some children will keep on chatting with a number of people, while others will zero in on just one partner. One particular group of children, those with the longest experience in chatting, had a special ritual: they treated the chat room as a territory to be conquered. When they were surfing as a group, in a special and well-equipped room, they saw their mission as that of tribal conquistadors, with the trophy going to the one who could amass the greatest

collection of telephone numbers in a session of some two hours. Each little list of numbers was a sign of inter-peer prestige. In a similar way, the pleasure of group chatting was enhanced by little conspiracies and games of seduction shared by the group. Chatting in company, they could turn themselves into their interlocutor and corroborate the data that the others had obtained. They could also identify the different roles that each interlocutor assumed with each of them. The children engaged in this exercise frequently in the navigation sessions we observed, as they did at home (those homes with a computer and Internet connection) or at school, at times when they could escape the teacher's gaze.

Post-chat fictions and realities

There is a dimension that we might define as the final chapter in the ritual of online interaction, and that is the face-to-face encounter. In some cases, there was a significant difference between groups of schools. It appeared that the less experienced youngsters or those with more modest technocultural capital tended to see the post-chat encounter as something beyond their reach, that they could hear about but would never be able to experience. "I never thought I would meet anyone from a chat room", said one boy, "because they live, say, 'way off in the United States and here we are poor, we're not going to go there and they're not going to come here, so all we're going to do is talk, just talk, talk about romantic things" (S-10). Another student, more experienced and from a higher sociocultural level, explained: "Generally speaking, what we're looking for in a chat is to make friends and have the chance to get to know someone physically, and then when we enter a chat room we already know the others, at least those from our country" (S-20). Among the users who hoped to meet their chatting partners in person, a majority preferred to stick to chat rooms from their own city or country. Although at the outset they tended to navigate indiscriminately, the best way to make friends was to find chat groups where others in the same geographic area were navigating. These users, middle-class and with a symbolic capital more appropriate to a certain image of the "reality" behind the Internet, were the ones who reported the most personal contacts with friends that they had made through chatting.

These real encounters tended to be preceded by a number of steps, usually in quick succession: a few telephone calls, a greater level of confidence, a declaration of emotional compatibility, identification or rejection through a certain tone of voice, and then a personal meeting by mutual agreement, preceded by very high expectations. Having had plenty of time to idealize the other person, they arrived at their first meeting expecting to find "the object of their desires". One girl spoke of her post-chat experience: "I got into a chat room one day, and I was looking for friendship. I gave this guy my telephone number, and I talked with him all the time, we made a date, we got to know each other. The first time we chatted, it was great because we didn't tell everything, we didn't look each other in the face. But when we got

to know each other personally we found that both of us had given somewhat different data" (S-23). At the post-chat meeting, the children find themselves in a situation where, depending on their previous level of communication, their control skills and the way they handle personal stereotypes, the bond they have established in the chat room and over the telephone will be reinforced or shattered.

These rituals that flow from interaction in the chat room exhibit variants and singularities – what we have described are the principal trends that we found in the group we studied. It is interesting to note how aware youngsters are of their repertory of interaction. Many of them assume a high degree of "modulation" in their behaviour, their questions and their responses, and they may even find some excuse ("I typed it wrong", "I didn't understand you") to make changes that will please their interlocutor. One girl said: "Of course I don't usually tell lies. But sometimes I will change things just a little, the things I say to the other person. After all, who's going to know whether I'm in university or in high school?" (S-23). This level of knowledge responds to the need to act with a certain "instrumentalist" strategy, especially for those who want to establish real bonds with their interlocutors. In the end, to get hard data, a mailing address or telephone number, is the goal that determines behaviour, although we cannot say that the interaction always takes place in this way. What we can say, however, is that every conversation goes through the different stages with distinct affective tones, with varied degrees of emotional and informational depth. Although all interlocutors can become deeply involved, there are some chatters who readily jump from one relationship to another, giving only the barest of data and the skimpiest of information on themselves in each case.

The digital self

> "Is it so hard to believe? Your clothing is different and the hollows of your body have disappeared. You have hair again. Your aspect now is what we call a residual self-image. It is the mental projection of your digital self." (*The Matrix*[31])

What we are has to do, in a very basic way, both with the representation of our own image and with the image others have of us. We always construct ourselves in relation to someone else. The "self" is an entity in relation, as Gergen (1996) puts it . For Lacan (1981), taking the psychoanalytic perspective, image plays a key role in constructing the identity of human beings. In his travels, every navigator wants to recognize and be recognized. Every trip is the history of his searches and every object found is, in a sense, a reflection of what he is, has and desires: a reflection of himself, of the "self" constructed in the infinite sea of Internet symbols. Man is a species that needs to mutate, and he "suffers if he does not change", as Bachelard wrote (1987: 18); and in Internet space, transformation and reinvention are daily occurrences. The "self", made up of mutations, changes and instabilities, is the "digital self" of

the cyberspace navigator: a self that projects desires and limitations, a self that exists in relation to the Internet, even when it is not connected to it. In a very essential way, although a youngster's life takes place outside the Internet, the linkage to its symbolic space can remain open. "We are outside the direct relationship with a technological object, but we are not foreign to the symbolic world it mediates for us, above all because, although we are outside the Net, we remain connected to the media circuit of which it is part."

The digital self is a symbolic construction, a representation that is constantly updated within the cultural practices of users of the media circuit. With the singularities inherent in their relationship with the Internet, within the symbolic space created with it, youngsters seek an opportunity for expression. Each of their experiences is an "identity avatar", a search for being, the kind of transaction between the tensions that define what the digital self desires and what it finds in its daily navigation, particularly in chat rooms. These tensions are present because limits and desires move and intertwine. Each of our young navigators is open to new experiences that allow him to redefine his identity and the ways he represents himself (as will be discussed below).

The textual pleasures of the non-book generation

> Language is a skin: I rub my language against the other. It is as if I had words instead of fingers, or fingers at the tip of my words. My language trembles with desire. The emotion derives from a double contact: on the one hand, a whole activity of discourse discreetly, indirectly, focuses upon a single signified, which is "I desire you", and releases, nourishes, ramifies it to the point of explosion (language experiences orgasm upon touching itself); on the other hand, I enwrap the other in my words, I caress, brush against, talk up this contact, I extend myself to make the commentary to which I submit the relation endure. (Barthes 1985)

The first identary experience that children have when chatting has to do with representation of their existence through a textual record.[32] It is a practice that is closely linked to the linguistic meaning of the processes by which the human identity is formed. Language is the primary structure through which an individual makes sense and order of the world. As Lacan (1981) sees it, we enter into the human world, with its subjectivation and the possibility of relationship, when we enter into language, which allows us to put a name to the Other, to be named by the Other, and to recognize ourselves as subjects in that naming. Language is the first, and probably one of the most essential, of collective structures. To be inside language, "to be in language", is to be inside the most complex and primordial web of bonds woven by our species in its process of humanization. "Through relational coordination language is born, and through language we acquire the capacity to make ourselves intelligible. Thus, the relationship replaces the individual as the fundamental unit of social life" (Gergen 1996: 309). As a being in language, the individual

is relationship. As an individual, his identity has been constructed in the relational language and his identity is therefore a narration, a historicization of what we have been, of how our relational microcosms have been constructed or destroyed. We recognize ourselves in language and we narrate/constitute ourselves through it. Relational life, which is structured in language, is the sign of an inevitable alienation, the "primordial alienation", which constitutes the subject (Lacan 1981). Before being "self" or subject, one is Other, because we use the Other's language, because we are the Other's language, because we name ourselves in it, because we move in its world of meaning, and once there, named and namers of the world, we are the Other, the Other of the "relational self" to which Gergen alludes.

Language introduces us into a cultural order, into rules for the construction and circulation of meanings. To be in language is to have a place in the world. A vantage point. An angle. A way of observing. "Beyond", "disorder" and "nothing" are words that begin to order the human view. "I look from language": the word allows us to see. We frequently find ethnographic examples that help to reveal this: for certain Inuit tribes, snow has as many as a dozen shades of white. Their language has many expressions for "seeing" the snow. There is a decisive connection between language and the way we view the world. "It is commonly held that language is the representation of the world. I would like to suggest the reverse: that the world is an image of language" (Von Foerster 1994: 100). And even if that were a solipsism, it would be absolutely correct for the world of chat rooms.

While the romantic writers in pen and ink of the 19th century were astonished when they explored their own subjectivity in depth, for today's youth those long mornings immersed in the digital text of the Internet reveal their hypersociality, mediated by the haphazard and disorderly words of the chat room. We have a generation of talkative chatters who are passionate about electronic text, not only in chat rooms but in e-mail and the romantic ads sections of the Internet – chatters who have perhaps never darkened the doorway of a post office and are now turning the mail into an institutional species on its way to extinction.

The writing that youngsters produce in the chat room is fractured, hurried; and its fragments have to be completed by the interlocutor. They believe in economy of language; and even when they stay online for long hours, they are aware of the fleetingness of time, of the possibility that their partner may disappear at any moment, and that they have absolutely no power to detain him. Short statements, monosyllables, succinct questions – these are the dominant features of chat room writing. The children are not used to developing their ideas and they start from a broad basis of shared assumptions. Being recognized as part of the media circuit saves them from providing great quantities of data on themselves. With little information available and with merely ritual questions as their tools, the youngsters must use the skimpy data they have to construct the image of the other person: in these circumstances they ask what they consider the most essential questions for

identifying the partner: What do you like? Have you listened to this? Have you seen such-and-such? Do you like the rumba? Video, music and parties are the identifying codes of a generation that is completely caught up in the media circuit that crisscrosses their daily life.

With its short and fragmentary texts, chat conversation signifies not written projection but "communicative intensity". In several sessions, many of the habitual chatters reported that they "talked for the sake of talking", that when the session was over there was nothing left, they had simply experienced the fleeting pleasure of the passing word. It is an anonymous conversation, and the next time it will begin all over again at point zero and for many it is likely to end there as well. In this sense, chat communication is prolix and, beyond its content, it reveals the importance of relationships, of entering into contact with others. We also find reiterative chatters, who always use the same predefined structure of brief communicative formulas. This type, more common among boys than among girls, finds in chatting that kind of creativity that invents not words but relationships. These children will usually write the same messages to all their partners – what counts is not the creativity of their words but the invention of a relationship.

For a generation of youth that is frequently taken to task for distancing itself from the culture of writing and books, it is surely paradoxical that one of the most frequent practices of young cybernauts is textual chatting. To a large extent, as noted earlier, this is because chatting is an experience that is not represented as a reading–writing exercise, and much less an academic reading – writing exercise. Yet, in our view, it is also because chat language is clearly not a written language, at least not in the sense that youngsters understand writing, and even less in the way they construct that language.

A special-effects language

If we look in greater detail at how chat language functions, we find a great similarity with the functioning of a communicative code that children have thoroughly mastered: that of audiovisual consumption. Chatters type out quick messages composed with the predefined letters and symbols available on the keyboard, repeating letters and words, playing with acronyms, mixing upper and lower cases, and taking advantage of the infinite possibilities of combining characters. They frequently accompany their messages with predesigned images as well, in the form of little icons (a heart, a smiling face), or the participant's nickname. On the other hand, their brevity of style and the need to capture the partner's attention require a language focused on establishing contact, on creating a link, and so chatters use a kind of "special effects" language to keep the partner alert and interested. And every chatter has the same assumption: if someone enters the chat room, it is for amusement; and knowing this, everyone assumes that to keep the chat going it must be amusing for the partner. One boy said: "When we go online that means we're not very busy, which is usual, right? So if you're not very busy, you want to

amuse yourself with something and it's very nice because when we go online and start to amuse ourselves everything goes very well, right? Because we're not committing ourselves to anything, we're just doing something that will make us laugh and that will be fun" (S-23).

Determined to amuse and to be amused, to have an impact and to feel one too, to experience an intense emotional involvement, the children use simple typing games and ready expressions, constructing in this way a "special effects" language. If we observe online conversations, we will find no lengthy narratives with elaborate metaphors – on the contrary, everything is concise and fragmentary. "What the youngsters like about chatting is not writing but communicating." The intensity of the communication lies not in its length but in the imaginary context of the relationship. Their shared cultural capital and the constant assumptions they make about each other help turn the chat room into the stage for an emotional relationship, either to entice the other party or to fight pitched battles online.

Tensions and shifting digital identity

> "The chat room", said one boy, "Is also a way of letting off steam, and then hiding when people look and say you're really awful, I don't like you, I don't want to chat with you . . . in the chat room you can cut loose and say what you want . . . or if you want to seduce[33] someone over the Internet, or anything that occurs to you, you can do it, and if someone suddenly says, hey, you're mean, you're gross, well fine, but nobody can kick you out, nobody can say, hey, scram" (S-14).

Although in daily life there is no explicit consciousness that "we are bodies", we often think about our body, in the way we present ourselves and in the way we act in front of others. Our body is an exclusive or inclusive sign, and in interrelationships it functions as a symbol of different degrees of attractiveness depending upon the group and cultural standards of socially accepted beauty. We are probably most aware of our body when we are in an affective interaction. Youngsters who are just emerging from an adolescence in which corporality has great social meaning feel their body either as a bridge or as a boundary, something that either unites them to others or separates them. When they are chatting, they become progressively more involved in their words and, in the opposite direction, there is a symbolic process of "psychological disembodiment". In a sense, the "textual existence" that the chatter acquires implies a shift in his communicative relationship with his body: in chatting we are less body and more language.

In comparing personal communication with what happens in the chat room, one boy said: "There are some people who say everything they can . . . they say all kinds of things, they open right up and they say anything and then later when you are talking personally, they shut up, they become more timid, but let's say in the chat room there's an atmosphere that makes us feel expansive, like free" (S-20). In daily life we judge people from what we see. On the

Internet, the digital realm of the visible, where children can "let it all hang out", it is paradoxically impossible to see the body of the other person. This experience has two important consequences. The first is the perception that there are "no limits". Without physical limits, the children feel released from self-censorship of the kind that governs their communication in other spheres of social life. In their daily lives, individuals think more than they say, but their ingrained social regulation creates degrees of self-control that facilitate interrelationships. In the chat room, children lose many of the characteristics of normal social interrelations: first the body, then self-censorship. The limits on communication dissipate, or rather become wider. The youngsters who admitted to having weaker communication skills in their daily life expressed this most emphatically.

The second consequence of "psychological disembodiment" is the perception that one's interior world is expanding, an experience that emerges with great expressive force. Feeling themselves freer and uncensored, young chatters communicate the things they feel most deeply about in their personal life. After passing through the bonding filters referred to earlier, they begin to represent themselves as two essences in contact. With no body to be seen or criticized, with their imagination excited by the notion that the other person is the object of their desires, they plunge quickly into an ambience of strong intimacy and subjective exaltation. In the world of fragmented speech, chatters communicate in a way that is almost mystical, with intense contact and strong sincerity. Normally, online conversations become a complex process for exploring subjectivity. One youth narrated how chatting led him into unexplored dimensions and facets of his identity and subjectivity: "It's like knowing about another facet of yourself, if someone is not there in front of you, you can say some pretty suggestive things (such as *papito*[34]) and get away with it . . . we did this once and had a lot of fun with it! We all have a creativity that is, like, impressive. So I think that we suddenly get to know ourselves, we can unburden ourselves of something that we have kept very close, and we know that the other person is not going to tell anyone" (S-23).

In this expressive and expansive atmosphere, young chatters can explore a wide range of possibilities for their digital identities. Without pretending to an exhaustive classification, we may organize the identities represented in the chat room into three basic functional forms. First, we have youngsters who prefer to represent themselves with the same self-image they have in their daily lives. These are the children who say they are "really themselves" when they are chatting. They are the most likely to achieve a prompt and advanced degree of intimacy with their interlocutor. Second, there are the youngsters who represent themselves by what they would like to be, with a certain image that they would like others to have in imagining them. Chatters of this kind like to engage in role-playing games where they represent people with features that represent their ideal. A third category of chatters relates to those who present an identity that they think their interlocutor is seeking. These children are experts at modulating their personality, jumping from

one role to another to meet the demands expressed by the partner. They train themselves to interpret schemes typical of the partner, they are aware of a wide range of possibilities, and they expect each partner to act more or less in a certain way. They are the most versatile of our three types since they have to constantly reconfigure their representation of their digital identity to adapt to other people's expectations.

Although we may imagine a broader classification, this one is what emerges most clearly from our observations of student behaviour in this study. Each of our chatters can exhibit these three ways of representing himself, separately or in combination, even during the same session. What most commonly happens is that the children will assume one of these types depending on their motivation, the places where they are navigating or the relationship they have established in their chat. For example, if they are seeking someone to play with and have a few minutes' fun, they will jump right in and start communicating without worrying about content or downstream goals. When they are navigating at school or at home, in the company of their peers, they will tend towards tribal behaviour. Demonstrating courage and inventiveness becomes a reason for going online to represent personalities and play role games that will fool the other person. As amusement, this practice serves to win recognition among their peers, and the same is true with acts of courtship. Boys more than girls (although girls too do this more often than they care to admit) seem compelled by tribal feelings to convert the search for "virtual conquests" into a kind of competition.

The strange logic of truth

"When I'm good I'm very good, but when I'm bad I'm better." (Mae West)

Role-playing, fiction and identity games are recurrent practice in the chat room. Testing how far one can push the invention of "self" leads to "a strange logic of truth" in online conversations. One boy declared: "If you're there in a chat, first you don't know whom you're talking with. Second, you don't know if everything he says is true. So you can talk with him and tell him your version of things and then he will do the same, but you don't know if it's true. It's fun to talk, but you can't be sure that what they are saying is always the truth" (S-23).

From their own experience with chat rooms, children are suspicious that others may be lying to them. And having done it themselves, they are aware that truth in chatting is always fragile and relative. The analogy of understanding others by what we ourselves do is common in everyday interpersonal interpretation. In constructing the truth about others, there is an implicit reciprocity. On this point one student said: "Maybe I wasn't telling the truth, but I wasn't sure whether they were telling me the truth either. So I just talked normally" (S-23). In the chat room, children construct truths and fictions at different scales. Assuming personal characteristics that they consider

desirable, they may tell falsehoods to entice the other person and to establish a subsequent relationship. Or they may pretend to the opposite traits in order to annoy and insult. In this case, the common practice is to pretend to be a person of the opposite sex from that of the partner: boys pretend to be girls and girls pretend to be boys. The game ends when the deception is finally revealed to the other partner. It is a demonstration of aggressive power in the face of a partner who is "presumed" to be sincere. There is of course a paradox in the logic of "truth in the chat room": it means assuming the other person's sincerity in order to deceive him. In this sense, then, we must put parentheses around the notion that chatting always involves lying.

In the game of representing the other person that takes place in these cases, there is an evident deviousness that implies being able to assume a role as well as possible. Starting from the premise that everyone may be a liar in the chat room, the youngsters know that in principle the others are on guard against being deceived. In representing their personality, then, they make a great effort to appear sincere. When they assume a "good" personality, they will say everything imaginable that is good; at the other extreme, when they are simulating an "evil" person, they will dredge up everything they can think of that is bad. Finally, one way in which the paradox of this strange logic of truth becomes clearest is when the children, guessing that they are being lied to, decide to be profoundly sincere. How does this happen? In one narrative, quoted above, a girl said she behaved very sincerely, although knowing that people might be deceiving her, because she knew that if she said something very personal, something that she would soon be sorry for having confessed, she could always say it was not true whenever she wished. This made her feel more comfortable since she could be as sincere as she wanted, even if everyone might be lying to her.

Teenage chatting: snippets of love talk

> What love unveils in me is energy. Everything I do has a sense to it . . . but that sense is an inaccessible finality: it is no more than the sense of my own strength.
> (Barthes 1985)

An age-old theme, as old as our species, jumps out at us from the chat sessions. "I got into this chat site", said one boy, "because right up front it says love and then I think, wow, love, and in I go" (S-10). At every online chat site there will be channels called "pink zone" or "for lovers", or "seeking a mate" or simply "love". At most of the chat sites used by youngsters, these rooms are classified by international geographic zone and by city for each country. Of course, the chat room does not have to be defined by its creators as a place for love talk in order for children to seize upon it as such, promptly and massively. Many chat sites carry ads in their interfaces offering free electronic greeting cards that carry love messages. Some sites offer a repertory of cute little love sayings, available for instant use. As well, the most popular

chat pages on the Internet offer dating and matchmaking services and sources of advice for the lovelorn.

Love sells – there is no doubt of that – and Internet companies know it. Users, for their part, find in the Internet a place to find and fall in love. Chat rooms are thus a popular place for seduction. Although both sexes like to seduce, it is the boys who seem to be more active at it. It is generally the boys who welcome girls to their conversations. In the chats we observed, at least during daytime navigating hours, girls, or at least female nicknames, show up in fewer numbers than males. When a girl joins a group, she is likely to be welcomed by many male chatters at the same time. This structure would seem to make girls "rare commodities" and thus highly sought after. We rarely found this in the case of boys. Probably for that reason, it is the boys who take the initiative to make contact with several female chatters, hoping that at least one will respond. The chat room seems to become a marketplace for seduction, a place where everyone can desire, where everyone can seduce, but it is swamped by messages from boys and the "hard to catch" behaviour of the girls reestablishes the normal active–passive ritual.

Most of the students in the public schools had no computer or Internet connection at home, but those who did had a favourite time for engaging in love talk: "For kids, Internet love is nocturnal." "At my cousin's house last night, we went online at nine o'clock and we got off at five in the morning," said one boy (S-29). When they have access, the best time for sharing love talk would seem to be at night. While the censor at school is the teacher, at home it is the parents – and they are more worried about the cost of the connection than they are about what the children do online.

The nature of love talk on the Internet is similar to the textual forms described earlier. The narrative style swings between two extremes: the classically romantic and the explicitly sexual. In the latter case it is the boys who say they are the less inhibited. The girls, while hardly indifferent, insist that they reject such content. The two kinds of love talk can be interchangeable and one may "morph" into the other. Similarly, "cyber romances" (limited to the Internet) are less frequent than post-chat encounters. Even boys who never thought of a "real" encounter as a possibility seemed to have no interest in a relationship conducted exclusively over the Internet. It may be that Internet-focused love relationships arise because of geographic distances, or because users are just beginning their relationship with the Internet, or perhaps, as we have seen, because they do not believe that other people can be more real than the fiction of their written words. We think, nevertheless, that it is geographic distance that in the end determines how long it will take for a virtual relationship to become a face-to-face one. Perhaps it is not very satisfying to have a "cyber girlfriend" living in the same city. On this point, one girl related her experience: "It was when I was just starting on the Internet, and I really wanted to visit Argentina because I like Argentine boys . . . so I went and I got to know a boy and we started to talk, and he sent me e-mail and I sent him e-mail. And then we got engaged over the Internet, we became

"cyber fiancés." And that went on for some time, then we stopped sending e-mail" (S-23). For a relationship of that kind, where affection can grow over time, if the partners had lived closer to each other, a personal meeting might have been the most feasible denouement.

Idealizing the other person in the midst of amorous discourse is something that occurs frequently in online conversation. When youngsters imagine the other party, they set up in their fantasies idealized objects with all the socially accepted beauty features: "The Internet would seem to have no room for the homely." "Many times", said one girl, "we imagine something ideal, OK? So if I want that other person to idealize me, I will say, no, I'm not tall, I'm about this size" (S-23). In this way the chat site functions as a place for updating and projecting the stereotype of one's object of desire, not only because one is seeking it but because each person can appear there as the most desirable partner. This "erotic dynamic" of chatting also has its counterpart: the public display of hatred and aggression. In several sessions and in the interviews, the youngsters, more frequently the boys than the girls, related situations of group aggression on the chat line. The boys had various strategies. When they could do so at school, they arranged among themselves to join a specific chat room and began as a group to insult selected participants in the public section of the site. They did the same thing when they set a time to join a chat room from home and began throwing insults. They functioned exactly like a tribo of warriors. This situation was highly analogous to that of video games that pit teams against enemies with one clear goal in mind: to kick them out of the chat room. One boy said: "Take the Argentines, for example. Those guys are really conceited, even on the Internet. So we pepper them with insults. For example, we will throw back the same words they use, for example the word *boludos* (jerks)" (S-20).

Although Internet site administrators are exerting increasing control over these situations, users find ways to keep on fighting each other (e.g. changing their name after it has been withdrawn). The target of their attack is not random: it amounts to constructing "Latin American regional stereotypes". Functioning nearly always at the country level, the youngsters in this study constructed a ranking of nationalities in which they respected some and insulted others. In the logic of these battles and in their representations of others, there is a particular geography. Colombians look down on Peruvians and insult them, and yet, reluctant to venture into unknown territory, they respect Mexicans, whose quirks they do not understand. Venezuelans simply do not exist. Hispanics in the United States are something new, and Colombians are ambiguous about them. They despise Argentines and try, unsuccessfully, to ignore them. It is interesting to note that, whether because of cultural relations, shared media symbols, language barriers[35] or geographic proximity, the youngsters prefer to chat with partners from Latin America, whether to insult them or to seduce them.

As can be seen, in the chat room love goes along with dislike and aggression. The outcome depends on different variables, many of which have

nothing to do with the express intention of the navigator since, as in a video game, even those least disposed to do so end up involved in the amorous logic of love talk or in the excitement of verbal "video war".

The chat room: online psychotherapy?

In the 1960s various kinds of group-based psychotherapeutic encounter techniques became popular. Among these was the T-group or therapy group.[36] The dynamics of this kind of encounter group are characterized by a strong feeling of community, high levels of sincerity, great subjective and intersubjective exploration and an openness to emotions of different kinds. Such groups were conducted in exclusive and confined spaces. They generally had a very strong personal impact. Yet, for their critics, they had one crucial weakness: by constituting themselves as a special space, they made themselves remote from the everyday life of participants and, although the experience might provoke spectacular changes in them, they proved to be fleeting and unstable. In short, the encounter group was an intensely emotional experience that tended to fade quickly once the therapy was concluded.

If we examine the space, the relationships, the content and the emotional settings that are created among youngsters when they enter a chat room, we will find important similarities with the behaviour of encounter groups. Their communicative openness is similar. The predominance of the affective dimension and expressive openness are factors that both spaces share. They also share one characteristic that was identified as a weakness of the encounter groups: the fact that they were divorced from the daily lives of participants. Chatting tends to function as a symbolic space that is disconnected from its environment. As a result of "psychological disembodiment", of identary experiences that idealize the self and others, youngsters experience the chat room as "a world apart", one that they enter, enjoy and then leave. It is not easy to say just how far the practice of chatting really intersects with the transformation and development of behaviours and personalities, yet from the data at hand, it would seem that online conversations occupy another of the "fragments of daily experience" that may or may not be articulated with the living space of each student. Although we must not assume that life is a coherent set of experiences (quite the contrary), the description of the chat room as "a world apart" lets us identify the behaviour of youngsters on the Internet as a fragmented experience.

Moreover, youngsters' clear preference for chatting is due to its potential for social relationships. As one boy put it, "Chatting is the only way we have of meeting more people, whereas if you enter a common and current page the only thing you can do is participate in a few forums or such, but there is no possibility of meeting more people" (S-22). With their hypersocial style, youngsters seek out spaces for contact on the Internet and although there are more communicative possibilities, compared to online conversations, they prefer the chat room, not only because they are unaware of other resources

or have technical limitations that impede access to them, but also because chatting offers a primordial possibility: there is always someone available, and available instantly. Without any waiting time, with cultural codes focused on the here and now, chatting represents an immediate and effective link to others.

Whether the experiences described here are desirable or not is beyond the interpretive claims of this study. Yet it is worth noting that an experience like that of the chat room can have both positive and negative aspects. What will in the end define the quality of the impact of digital technology on this population group is not the direct relationship with the object (which is rarer than we would like) but the environment and the meanings with which cyberspace culture relates to their everyday lives. What happens to a youngster when using the Internet has to do more with what happens in his life as a whole than with what he does in his determined and excited navigation through the chat rooms.

The media circuit

The mass media and electronic networks function as a symbolic interconnected circuit. In that kind of techno-communicative macro-network, the Internet exists in a "media circuit" where practices and meanings are exchanged. Each ICT relates to other media and to itself, as a highly complex symbolic circuit. Communication technologies have an inter-referential and omnipresent existence in the fabric of social life: advertising comes alive on television and video, the Internet sells us stations and music that we can hear on the radio, while the radio tells us about the great informational value of the Web. But this media circuit does not stop there. Our conversations feed upon advertising slogans and vice versa: the media throws our own language back at us. To repeat what one boy said, taking his words from an advertisement, "I really like the advertising slogan for Sprite – it says a lot. Even though what they're trying to sell is a brand, in fact it says a lot." The media circuit reaffirms, with the participation of spectators and users, a space of symbolic interaction. The "macro-network" of the media circuit is not only technological, it is above all cultural. In other words, before the Internet we were already connected to the "macro-net", to the media circuit of contemporary technocultures.

Today's space is like Alice's mirror shattered into bits. With the multiplicity of images of the world produced by our relationship with the media, we do not know exactly where reality begins and fiction ends, or whether that division is even valid. Before the digital networks and the audiovisual media, in that time that we can no longer imagine, we obtained our images of the world from primary groups and our local environment: they were few and clearly defined. The lifestyles that we observed were primarily those of our surroundings. This restricted setting was readily knowable. Life was based on order: everything had its name, nearly always an everyday name. There

was only one mirror in which we could see ourselves. But that mirror was broken. Mass ICTs were invented and they began to produce images that overwhelmed the human capacity to process them. These technologies, directly or indirectly, now inhabit our daily lives. For the generation of youngsters in this study, who were born when the Internet was already 15 years old, their surroundings, however humble, have been peopled by objects, by communication structures, by relations and by meanings constructed within them.

The Internet emerges in this space, where youngsters have suffered a process of "technological socialization". The audiovisual media have been the greatest technological sensitizers of youth. While a society's media circuit is articulated with various communication systems, when it comes to youth there are two systems that are fundamental: music and television. At the wrap-up of one discussion group with youngsters in the study, one of them commented on his work on the topic of the media: "Well, we took a kind of survey among those of us who were discussing this topic, where we could see how often we used each of these communication media – we saw that the telephone gets used between 45 minutes and an hour, and when we have no telephone this affects us but only to 50 percent; television we use on average for 12 hours a day, and if we didn't have TV it would affect us to 90 percent; as for the radio, we listen to it an average of 8 hours a day, and if we didn't have it that would affect us to 80 percent" (S-14).

Youngsters not only consume long hours of television time, but they are aware that they do so. Through television they have steeped themselves in some of the principal logics they now use on the Internet. To some extent we may say that many young television viewers navigate over the Internet in the same way they do with television: the youngster who surfs through the ads on the Internet and navigates in multiple windows at random has long been familiar with the effectiveness of "zapping" through television channels.

When it comes to music, it occupies a social space with a complex symbolic structure, the principal scenario for which is the radio, another of the main components of this media circuit. Radio is a market of signs, types, groups, rituals, daily practices, entertainment, tastes and aesthetics. In the mid-1980s, with the great popularity of the media and the transnational growth of record companies and the mass marketing of musical video clips, youngsters came to recognize the music of the market as an identifying object. Radio, for which there is a wide audience in the country, began to establish a style based on "musical interaction" with young listeners. In the beginning many broadcasters offered youth music programmes and later "musical variety magazines" for youngsters. This meant simply that the station allowed listeners to set the programme by calling in their requests. What made (and still makes) these programmes successful was their "interactive" nature. They in fact set the style for the next decade. The 1990s saw a burgeoning of a type of radio programming based on cultural codes that were deeply shared by youths. The children would call up the station, interact with the hosts and respond to

other listeners. Besides gratifying the wishes of their young listeners, these programmes appealed to them with questions about their private lives. The rumba, infidelity, love, betrayal, sexual initiation – such issues were frequently addressed over countless stations of this kind.

Radio, music and television are the main elements that shape what is a space of reception, a media circuit, a space for cultural appropriation of the Internet. Yet youngsters also find differences that, except for the cost of access, work in favour of a more "positive" representation of the Internet. The main difference lies in their perception of the Internet as a more manageable space, one where they feel more in control over content and events. "On television", said one student, "you have the programmes they are offering, but on the Internet we can look for other things that interest us, something we might want to learn, or you might have some curiosity you want to investigate, whereas with TV, well, you watch programmes" (S-30). The fact that they feel the Internet to be more open to their own decisions and that they see depth in its content creates in youngsters a feeling of greater autonomy than what they experience with the remote control unit for their television.

On the other hand, the relationship of the media circuit with the Internet also opens a space for differences that, according to youngsters, work increasingly in favour of the Internet. Those perceived differences are important: they relate to format, scope, organization, and, above all, the depth of information. On the Internet, in its representation as an "unlimited object", a space open to view, youngsters find greater depth and therefore more credibility. "Let's face it," said one boy, "television sometimes lies, you can hear a lot of lies on the news programmes, and then the next day you look in a newspaper and you find more information and you realize that's not the way they were painting it, because the communication media are already in cahoots, whereas with the Internet we can find a lot of things, you can give your own opinion, and that's great because there you can see your own point of view and what you believe, and not what the newscasters are telling you" (S-27).

In another respect, relating to the gender of users, the media circuit has important differences. Comparatively speaking, our study found that technical skills in using the Internet and handling the computer itself were greater among boys than girls. The processes of technological socialization have produced an image where men can control machines. In everyday life, women have less chance to explore technological objects. This socializing style can also be seen in the approach to the Internet, and power is redistributed over a scale that ranges from the simplest objects, the television screen, to the most complex ones like the computer: boys work with computers and girls watch television. On this point, one boy said: "I spend nearly my whole day at the computer, and the one who watches television is mainly my sister" (S-22). There are differences, too, in navigation practices: the girls will visit things like horoscopes, while the boys prefer sports; the girls go for singers, the boys for online games. Yet when youngsters find themselves with homework tasks that require Internet searching, many girls are more at ease with this than are their male classmates.

The Internet has integrated itself smoothly into the media scenario, mainly because it has affinities with its predecessors in the areas that children use most. In the media circuit, including the Internet, youngsters find a way of keeping in contact with their generation. The great capacity of fashion (an important focus of the media circuit) for informing youths about the behaviour, emotions, values and symbols accepted by other youths is what makes it so central to their lives. The latest song, the sports scores, the horoscopes, the fashion models, the special effects and the latest software are just some of the many things that circulate through the media circuit. For youngsters, the information contained there has to do with the world that is important to them, far more than the daily routine of school, family or tradition. On this point, one youth observed: "The communication media teach everything, everything a person can learn: vocabulary, teaching, learning" (S-21).

The need to prohibit reading

> To show you where your desire lies all I have to do is prohibit it a little . . .
> (Barthes 1985)

A frequent concern of teachers when they leave students alone with the Internet is that they will visit pornographic sites. And of course students confirm their teachers' expectation. For youngsters, the prohibited sites are the X-rated pages. Visiting them awakens tribal emotions of complicity, praise, delight and other shared states of mind that arise when navigating through "porno" pages of the Web. The awareness that they are breaking a rule, that what they are doing is prohibited, makes them even more determined to navigate through censored sites.[37] In this respect, one student stated: "There are lots of things on the Internet that are prohibited, and so they have a real cache. Anything that is prohibited is going to be even more exciting when you can finally get to it. If political pages and such were prohibited, then everybody would be rushing to political pages to see what they're all about" (S-25).

Applying the logic of this narrative, it will be clear that if we want to achieve a certain goal we must first "prohibit it a little". The act of jumping over the bounds of prohibition has two principal aspects, in the context of our research. First, the function of accessing pornographic material is a form of confrontation against school regulations. In many cases, the main reason for visiting "X" pages is to enjoy the thrill of being disobedient or rebellious. "At school", said one girl, "what happened is they used these screen savers of girls, naughty girls all bent over, and they said they couldn't sleep at night because of the scandal the guys were causing" (S-12). The second aspect relates directly to the complex process of personal development in a cultural setting that makes a strategy of exhibiting the body as a visual product. That issue is beyond the scope of this study, but we may say that in their psychosocial development these youngsters show signs of vague but real cultural stress over their sexuality. The off-limits "X" sites in effect make the Internet a

place where the things they are forbidden to look at are on full and open display. If the principle that everything can be shown on the Internet brings with it censorship, then the "X" sites become really seductive: if something is prohibited in a realm where everything is visible, the children will have all the more desire to see it. In any case, amid all this visual abundance, the "X" sites are equations that are solved by the "order of desire" that a culture constructs.

Epilogue: the strategic importance of the Internet extends beyond it

Because of the way the images of ICTs are disseminated in our countries, they have been converted into an oversignified object, more imagined than real, an ambiguous cultural object that is both desired and feared. As "technophiles", we are dazzled, enchanted and seduced by computers; as "technophobes", we look upon them with scepticism and suspicion and are quick to denounce the dehumanization to which they are leading us. Perhaps we are not at either of these extremes, which apply to many objects of human technology; perhaps we are in some intermediate and shifting position. Perhaps not. For some people, digital technology could be (and this is merely a hypothesis) the representation of a globalized world, modern and hyperwired, from which we as a peripheral country are excluded; for others, that technology is probably something magical, inexplicable and anthropomorphic lurking in some recess of their daily lives. Whatever our attitude, it is impossible to be indifferent to it, and we are bound to construct some image of what it is, even if we have not tried it yet.

In the fields of work and communication, computer technology is a tool widely recognized for its potential for increasing productivity. In the world of education and in everyday life, its possibilities, as we have seen, are still limited and unexplored, at least in our country. In our context, existing technology is inequitably distributed in the midst of an educational structure that is notably segmented and socially differentiated in terms of quality.[38] Recent studies of public education (Parra 1995; Castañeda 1996; IDEP 1999) have shown that the educational structure is very weak, with an undertrained teaching staff, rigid school organization and dynamics, systemic instabilities, discontinuity in planning, and education policies that have little impact – as well as a chronic lack of funds, which are increasingly being siphoned off to fight the guerrilla war or to mitigate its consequences.

Similarly, various academic achievement tests administered to students in mathematics, formal reasoning, maternal language and foreign language skills (which are essential in view of the spread of English as the predominant language of the Internet) have shown enormous shortcomings in the development of the country's children and youth. Given the limited degree to which ICTs have been incorporated in the schools and the problems of appropriating them culturally, there is a need to rethink the strategies for

using ICT in education, starting with primary and secondary schools, which are the least-served levels of the system in this respect. This is of course a problem of huge scope that can be viewed from many angles – to start with, by analyzing the problem we have addressed in this study: the psychosocial experience and cultural practice of students with the Internet. In a world that seeks to become a planetary society, where the circulation of knowledge and communication are the keystones of its functioning, "technocultural skills" must be a fundamental issue for the education agenda of all Latin American countries, especially when we recognize that the unequal appropriation of ICT is having an ever more decisive impact on the international scene.

Moreover, the impacts of the new ICTs that we have attempted to examine here need to be recognized in rethinking social policies for ICT, reorganizing the school system and developing training policies and refresher courses for teachers. Current educational thinking is assigning the teacher a new role, one that is highly promising in the debate over ICT in education. The United Nations Education Agenda declares: "The teacher is increasingly a learning facilitator, a skilled mediator between multiple educational opportunities and the motivations and expectations of students" (Gómez Buendía 1998: 229). If the teacher is to be a facilitator and mediator, there must be a more cooperative relationship between students and instructors. The generational gap in technological skills can complicate the pedagogical relationship, because teachers are not always well trained in the use of digital tools, but it can also be a valuable opportunity to share knowledge, to redefine teaching–learning roles and to foster a climate of cooperative exploration between teachers and students.

When it comes to the appropriation of ICTs in the school culture, we must question the frequent representation of that process as simply having a "machine" and learning to manipulate it. International experience and the results of this study show that technology, however complicated, sophisticated and accessible it may be, requires a suitable context for appropriation. If it is disconnected from planned education projects, from organized experiences, from systematic cultural and pedagogical designs, it will have little chance to produce innovations that will improve the quality of education and promote social equity. Technology "is not just a question of working skills". In the case of the Internet, as we have seen, the inability to take full advantage of it stems from the social relationship in which it is introduced. The success or failure of the Internet, whether in the school or in society, will depend on the cultural space of appropriation: the best technology can disappoint in the context of an unstable social, cultural and educational relationship.

Notes

1. Besides the lead researcher, this study involved advisors and research assistants in the fields of psychology, anthropology, systems engineering and pedagogy. The following were members at various times of the interdisciplinary team: Rocío Rueda, Elizabeth Castillo, Ivanna Castaño, Mauricio González, Paola Pardo, Paola Agudelo, Andrés Pérez, Elkin Garavito, Marcela Ortiz and María Fernanda Otero Hernández.
2. See <http://glca.org/mellon99/rheingold.shtml>.
3. Of course, in addressing the cultural practice component that is also implied in the question, we are thinking in terms of an assumed link to "cultural studies": culture is understood here as the realm in which meanings are produced. To understand the "meaningful practices" in which culture operates is to recognize a highly visible fact: the urban dynamics that characterize contemporary culture are strongly tied up with the new forms in which cultural meaning is produced and communicated.
4. As we shall see in this study, such "resignification" does not mean placing all the emphasis on the user's autonomy in order to indicate his capacities for freedom, strength or resistance with respect to the Internet. Although we keep a healthy distance from viewpoints that treat the media as "powerful, omnipresent and manipulative", we also steer clear of the opposite pole of "total resignification", which assumes that the audience is just as "resistant", free and autonomous as we would like it to be. What is certain is that subject–technology relationships take shape within a complex web of interplay between technological objects, meanings, contexts and users from which multiple directions, determinations and reciprocities are constructed.
5. Of course, the concept of cultural capital is of a magnitude and complexity that far exceed the bounds of this study. Nevertheless, as an interpretive tool it has allowed us to approximate the cultural dynamics essential to our research goals.
6. The different versions of its origin that circulate over the Internet all agree that from its earliest days e-mail and bulletin boards were among the widely used resources, the content of which typically referred to the daily lives and personal relations of scientists, academics and military personnel, who were the principal users at that time.
7. In the first exploratory phase we sought information on a sample of about 120 public high schools.
8. Data for Colombia were taken from marketing research by M. Puertas, published in *El Tiempo* Bogota, October 15, 2000, Section 4.
9. This programme includes an equipment component and a training component for teachers and education officials. According to its own data, REDP is to be implemented in three phases: in the first, 200 schools will be connected, in the second 492 and in the third 35. An operations centre has been established to administer and run the service. Schools were equipped in accordance with two scales, ranging from 3 to 10 computers each, the latter cases including a server.

10. We should point out that, apart from the REDP figures and project implementation data, available information on the previous status of the Internet in Bogota is hopelessly inadequate.
11. The global inventory also highlighted how social representation plays a key role in ICT efforts in the city's education system. Indeed, the problem lies not only in what happens but also in how it is viewed: for one school, getting 2 computers could be the answer to its dreams, while for another the 20 new computers it has just received might fall far short of its expectations.
12. A few of the schools were private: they were selected because certain similarities and variables such as experience and gender made them interesting to explore, and particularly because they offered useful information that could be generalized to all the target schools. A well-equipped private girls' school, with a socially mixed student body, was the principal source of information on how girls behaved with the Internet.
13. Paradoxically, despite the broad sample we started with, we had great difficulty in selecting our focus group because the information mechanisms on the education system are sketchy and highly disorganized in this respect. There is no consolidated information available at the central level, and not enough is known about experience in the schools. Moreover, outsiders face considerable hurdles in gaining access to the schools.
14. This experiment was crucial in observing how the school setting, which is more symbolic and physical, affected the representational dynamics of the Internet among the students.
15. With a video camera focused only on their screen, the children talked about the steps they were taking in their navigation. Despite its tremendous potential for capturing direct information, this tool was not very useful to us because of technical difficulties and the fact that the children frequently neglected to record their doings.
16. As one might expect, it was the free navigation sessions that were most in demand.
17. The student survey was open, but it covered only information from the target schools. The teacher survey was administered to each teacher on a voluntary basis and included the non-target schools. Although the interviews were not as systematic as we would have liked, they did shed some interesting light on basic aspects and thereby helped to confirm our qualitative interpretations.
18. We preferred to be focused rather than exhaustive in presenting our findings. The CD-ROM that was prepared as part of the research contains more interactive and in-depth ethnographic information, in video, audio and text formats.
19. In accordance with our ethnographic approach, the report is designed to highlight the players' own voices. Their stories, recast to make them readable in written form, are identified as follows: S or T, followed by the number of the ethnographic database file in which the story is recorded. "S" refers to student and "T" to teacher.

20. There is also another possible option: the difference in the two cultures may be sustainable and perhaps the "resignification" of school means that the school must differentiate itself and enhance its identity, i.e. it may be that the learning experience it offers is so significant as to be not the exclusive space for knowing and learning (in today's society there are many other contexts where intense knowledge and learning experiences can be had) but rather the place for a particular kind of knowledge and learning that is not out of tune with students' cultural surroundings but complements them and allows the students to represent them differently.
21. In this study one of the six institutions selected offered a good example of a school that is integrated with its cultural setting. Another one came close; and although it was a public school, its geographic and cultural setting coincided in general terms with those of a middle-class institution. Some students in a third school belonged to the middle class and had some real sociocultural possibilities. Most of the other schools in the preliminary phase of the study fell under the category of schools in crisis, as described earlier.
22. Commercial transactions over the Internet were reported by only a few students from the school with the highest socioeconomic level and by one student from a public school, whose well-off parents had participated in online auctions.
23. They navigated with skill and enthusiasm through the sites of their favourite singers and actors, the web sites for their favourite television programmes and online magazines, and yet, paradoxically, both in the interviews and in the discussion groups, the students complained openly about excessive advertising on the Internet.
24. In the course of planning their careers, some of them have been looking to foreign universities to pursue their postsecondary education. A boy from the highest-income school, with a "technological imagination" fed by living in his well-equipped high-tech home, said: "Most of us want to study something related to mechatronics. There is no way to do that here in Colombia. I know already that I am going to study in Spain and that my parents will foot the bill" (S-19).
25. There is an extensive literature on this point. For a synthetic summary, see Hernández (1998) and Martín Barbero (1996).
26. One student told us how she reads with the Internet: "I download the information, I print it all out, I look at the pages of the magazines and I print some of them, and I have an album of everything I printed out, everything that I have looked at" (S-23). Incidentally, electronic magazines are among the pages most frequently visited by the students we interviewed.
27. For its part, the school tends to ignore this "hyper-reader" exercise in its "reading–writing" component.
28. The teachers reported a recent negative experience with a massive virtual training course, which aroused great enthusiasm among teachers in Bogota but, because of the technical and pedagogical weaknesses of the software, generated frustration and rejection within the education community.
29. For the notion of cultural and symbolic capital, see Bourdieu (1985, 1990).

30. From "Betty la fea", a popular Colombian television series (translator's note).
31. *The Matrix* is a 1999 film produced by Warner Brothers, written and directed by the Wachowsky Brothers.
32. The observations and statistics in this study indicate that the only kind of chat in which the youngsters engaged was in written form. Video and voice sites (even a predefined voice selected by the user) did not enter into their experience in navigating the Web.
33. *Levantar* in youth slang.
34. *Papitos*, flirtatious compliments with a heavy sexual undertone.
35. One of the questions in the survey used for this study asked about knowledge of English on the Internet. The students generally scored quite low, perhaps the lowest for any question. If we are planning the rigorous introduction of the Internet at school, we will quickly run into a still-unrecognized problem for the public school: the low level of second-language skills. In the national tests given to students in the last year of high school, English was the subject in which scores were the lowest throughout the country, both in public and private schools.
36. For our discussion of encounter groups, we have relied on Dreyfus (1977) and Schutz (1973). Dreyfus reviews the literature and the classics from the heyday of the encounter group, while Schutz, a proponent of one of its currents, addresses the topic from his own psychotherapeutic perspective.
37. As well, there is an element of gender differentiation. Boys are more likely than girls to be interested in pages with explicit sexual content.
38. The differentiation of the new ICTs in Latin America is growing. For Finquelievich (1998), ICTs have split the city in two: a rich one and a poor one. This division is not new but, in the big cities of Latin America in particular, a new duality has emerged together with the intensification of knowledge and information activities.

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