

The social impact of information and communication technologies at the local level

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Frame of reference

In his inaugural address to the country on May 21, 2000, President Gustavo Lagos referred to the issue of introducing and expanding new information and communication technologies (ICTs) in Chilean society.¹ At that time he described it as a priority, as an urgent need that the country would have to address if it did not want to be left behind in international development. As he put it, the development of new ICTs would not only align the country with other nations in this area, but would also permit social, political and economic development on the home front that would be impossible to obtain in any other way.

The explosive development of ICTs to which the President referred is, in fact, an inescapable reality. We are caught up in it, like it or not. But what is missing from that statement is the fact that these new technologies are bound to lead us in an uncertain direction and at the present time we are simply unable to predict the impacts that they may have.

There exists today a body of knowledge, primarily technical, that focuses on the quantitative dimensions of the spread of technological infrastructure, and it has tended to exaggerate the economic benefits of that spread. This approach has pushed aside deeper thinking about the social and cultural impact that accompanies these technologies. What we need is to observe and analyze how the technological advances of the communications industry have transformed social relationships, i.e. the ways in which men and women communicate and inform themselves and the meaning that this dimension takes on in their daily lives.

This report describes a research project entitled "Social impact of information and communication technologies at the local level". The key objective of the study was to identify how ICTs have been implanted on the national scene and specifically at the local or municipal level. It sought to identify characteristics and trends in the implementation and use of new ICTs from two perspectives: the experience of municipalities on one hand, and the perceptions of men and women in the municipality on the other. By analyzing their statements, we present the narrative constructed by both parties on ICTs at the local level.²

The study involved observing the possibilities that new ICTs offer to people in terms of participation. It is argued that ICTs can constitute spaces for social integration and the expansion of citizens' rights. Yet, for this to happen, equality of access to and integration of those technologies are prerequisites: otherwise we run the risk of reproducing factors of exclusion and inequity, and consequently we will fail to achieve real linkages between the municipality and the citizens.

General context

The emergence of ICTs has led to great societal and environmental changes that have wide-reaching implications. On one hand, they involve not only enormous and obvious benefits, but also significant costs. On the other hand, they have posed new parameters of discrimination, given the gap that exists between groups that have access to the new technologies and those that are excluded. This exclusion of impoverished groups from access to information often coincides with and reinforces other types of exclusion (on economic or gender grounds).

The arrival in Latin America of communication technology, and all its variables, has been marked by inequality. From the beginning, the information technology industry players have been concentrated in conglomerates in countries of the First World, which then expanded their activities and products to different regions and in this way transformed themselves into huge financial groups that have dominated the communications, information and entertainment industries. A UNESCO report on world communications notes that of the 78 largest communications firms, ranked by volume of media sales, 39 are headquartered in the United States, 25 in Western Europe, 8 in Japan, 5 in Canada and 1 in Australia. None of them belong to a developing country (UNESCO 1989: 104–5). This is but one example from a long list demonstrating this inequality at the international level.

Studies on ICTs have focused generally on inequalities between countries and regions, contrasting those that are “developed” with those that are “yet to be developed”. This technological divide has been examined from many angles, most of them focused on identifying the benefits and the limitations apparent in this field. Studies at the national level, meanwhile, tend to concentrate on quantitative aspects of the introduction of ICTs. This technocratic approach is the one that has been pursued furthest, and it has typically given an encouraging interpretation to data that are highly discouraging. Rising figures are hailed optimistically from the viewpoint of satisfying a need and are seen as justifying the dazzled enthusiasm with which different countries have reacted to the new technologies (Mattelart and Schmucler 1983).

From the standpoint of the countries that produce them, ICTs represent a new stage in the accelerating march to modernity, indeed a qualitative leap – from the industrial revolution to the electronic revolution – from which no

country dare abstain, on pain of both economic and cultural death. In Latin America, these technologies have arrived in a setting marked by schizophrenia, between modernization and the real prospects for social and cultural appropriation of what is modernizing us. "Computerize or die" is the slogan in countries where capitalism is in crisis and where it is urgent to expand the consumption of computer products (Martín-Barbero 1987). It seems we hardly finish implementing one technology before we are forced to take on a new one. Since the first long-distance communication media came into use, created in developed countries, we have been receivers and disseminators of these new inventions and tools, and the results have been more successful in some cases than in others.

This schizophrenia makes itself felt in different ways and different settings. We can find its mark in daily life and in decisions that imply abrupt shifts in national policy. We have what Martín-Barbero (1987) calls a "semantic void". This means that new technologies, because they do not relate to their context of production, are consumed in a vacuum, a void that most of these countries fill by "semanticizing" the new objective with the language of magic or religion. In this context, questions arise about the characteristics of this consumption and about the content and meaning through which this semantic void is being shaped. We may speak here of a process of "resignification" of these new technologies in Latin America, i.e. the new meanings that men and women assign to ICTs on the basis of their own daily experience, uses and values.

National versus local

Chile is well on its way to joining the information society. The 1990s witnessed extraordinary growth in the basic infrastructure of the new ICTs. During that time, the number of fixed telephones tripled, cell phones went from none to 800,000 units, and the number of cable television subscribers grew from zero to 900,000 homes. Institutions, businesses and, to a lesser degree, households have been steadily computerizing: the number of computers per capita in those sectors multiplied by a factor of 6. Nineteen percent of the labour force already work with computers, and 11 percent of homes have them (Government of Chile, n.d.).

In the course of modernization and decentralization, the state has taken on the task of adopting the new technologies as a way of strengthening its institutional apparatus in technical terms. This has generated a "technical-communicational" policy approach at the senior levels of public management.³

It is the local setting that has become the point of articulation between the generation of these proposals and society as a whole. This has taken on new importance in the current social context, as a strategic place for the flourishing of democracy and of a solidarity that transcends its limits. In fact many regional and municipal governments have undertaken initiatives for consolidating democracy and modernization. Yet we know little about the

process of articulation through new ICTs at the local level, or of the use and impact of ICTs in municipal management.

Communication as participation

In the countries of our region, it is vitally important to involve men and women democratically in reinventing the local sphere, not only as a political goal but as a potent force for the conquest of new community spaces (Alfaro 1995). But this process of democratizing the country requires, as an absolute condition, that access to communication be treated as an essential right of citizenship. That right will become a basic right for the future, where the focus will be public and participatory.

Participation is an essential aspect of making a political system representative. Where there is no participation, interests can be manipulated and some will be overrepresented while others are underrepresented. If communication is to help foster participation, it must be based on information distribution networks that are operational rather than hierarchical, we must invest in communication infrastructure where the user can not only see and hear but also speak and be heard, and the information conveyed must be credible, true and timely (Lahera 1995). Only in this way can communication at the local level establish a bond between local government and the community – and the quality of that bond will be defined by its ability to activate the communicational functions of the different parties to that relationship. This implies rights and responsibilities with respect to information, dissemination and other communicational elements that reinforce the process of local development and ensure community participation in it. ICTs must provide the “glue” in all these functions.

Information technologies cannot by themselves ensure participation, but if they are properly incorporated they will provide opportunities for such participation and will help to reformulate the ways in which government institutions and communities interact, as well as their relationship with information. As Lahera (1995) notes, there has been no consistent approach and no clear policy for introducing information technology in the public sector. There has been no attempt to interconnect services, which means that much existing information is duplicated.

The municipal scenario

The introduction of new ICTs in the municipalities has been a slow process, but it has gathered speed over the last three years as the computer infrastructure in the various municipal departments has expanded. As one municipal official put it, “In 1992 we filled the town hall with electric typewriters. In 1994 we replaced them with word processors, and in 1996 we threw those out for computers, so that in 1998 every unit has them, although not as many as they are asking for.”

This process, which has repeated itself in all the municipalities we studied, reveals a series of distinct stages. First, computers are introduced in a limited way, then they are gradually extended to the various municipal departments, and finally other technologies are integrated. It is important to recognize that, while these stages are to some extent interdependent – i.e. progress must be from stage to stage – they are not exclusive, in the sense that a subsequent stage may retain many of the characteristics of the previous one.

First stage: introducing ICTs

The initial introduction of ICTs in municipal governments was rather disorganized and haphazard. Their implementation and their maintenance relied on the interest and willingness of a few officials, generally young professionals with technological backgrounds who championed the development of the technologies and their use in the workplace. They agitated for the purchase of equipment, first for their own use and later to encourage collective application. Although this was taking place at the same time as ICTs were being introduced in other settings such as the central government and businesses, it is important to consider their arrival on the local scene because this points to a new kind of citizen who has professional training in ICTs. The approach of these young people is essentially technical, and their fascination with the new technologies lies in their assessment of costs and benefits. As they see them, those benefits relate primarily to saving time, saving money, modernizing, and improving management. As the municipal government begins to establish a formal informatics unit, the role of these young instigators gradually diminishes.

Chile still does not have people specifically responsible for introducing ICTs in municipal governments: this is being done by professionals who help informally with the purchase of computers. There are no informatics departments, no maintenance specialists, and no provisions for this item in the municipal budget. Programmes and operating systems are not compatible between machines, and they have generally been acquired informally.

The pattern of distribution of the limited number of available computers reflects the hierarchical structure of the institution. Thus, the first to receive the equipment are the senior managers' offices, even though it could be put to better use in other departments. The equipment is strictly controlled – one municipality kept all its computers in a locked office controlled by the administration. This first phase is followed by an expansion in the number of computers, at which point we see a shift towards better organization in the installation of these new technologies.

Second stage: expanding ICTs

This stage, in which the provision of computer equipment is expanded, marks the beginning of a process of formalization, and the installation of computers

is consolidated, although not completely. All departments are gradually outfitted, and the sense of hierarchical exclusivity disappears. Computer use is “democratized” and a new objective is set: to equip professional staff with computers in order to ensure better management.

According to those interviewed, it is the town-hall management staff who demand better computer equipment in order to keep up with their counterparts in the national government and in wealthier municipalities. In other words, the demand did not originate from the users. In some towns, the demands of these managers were viewed initially as a further burden on scarce resources and as having more to do with professional jealousy than with efficiency. Yet this view will gradually change as the introduction of these technologies produces concrete results, such as improving municipal management by modernizing the provision of services.

Against this background, we can see that the introduction of computers in all the municipalities observed was based on a rationale of strengthening internal management and administration. This reflects the need to manage information within the municipalities, especially in finances and to create management databases. At the same time, efforts to introduce the new technologies are concentrated on service departments, such as transportation, where they are used for processing driving licences and vehicle registration applications, and for handling geographic information and the sanitation system.

The rationale behind the decisions on the distribution of ICTs reflects a definite interest in improving technical and administrative services, although this also has a significant impact on relations with the public, in the sense that functions are performed better and public services are improved. At the same time, we must note that this rationale pays no heed to the communicational and bridge-building aspects of the new technologies, thereby ignoring the issue of promoting citizenship.

Computers have had less impact in the municipal social services departments, where they are viewed primarily as a support for handling internal information. Officials explained this as partly due to the fact that efforts have been concentrated in the areas referred to above, but also due to the fact that professional staff in social services cannot really identify with the new technologies. One person interviewed indicated that the shortage of progress in this area reflected a lack of interest in new technologies on the part of his professional staff and a tendency to look down their noses at computer work – they see this as little more than glorified typing, something that is merely “a secretary’s job”. Through lack of knowledge, they lose sight of the real properties of the tool – its speed and its ability to store and process huge volumes of information and they reify it, assigning it traditional and devalued meanings. This view goes hand-in-hand with that of other officials who see no need for computers and feel that ICTs in social services are a luxury.

An important element at this stage in the introduction of ICTs was the delivery of the Social Stratification Program of the Ministry of Development and National Planning (MIDEPLAN). This software program provides a system for handling CAS II (Communal Social Assistance Committee), a tool for identifying extremely poor people and targeting assistance programmes at the neediest sectors. It was delivered under the Single National Software Project, as part of the campaign to modernize the state, and is intended to provide all municipalities, *intendencias*, provincial governments, regional offices and national ministries with a single, homogeneous and user-friendly system. It has been distributed free to communes, which can use it to streamline administrative procedures involved in surveying needs and allocating social benefits.⁴ It has come complete with technical support and training. This was mentioned by all the municipalities and is regarded as one of the few experiences that they all have in common, although it does not seem to be of great concern to the individual communes.

While the specific value of this experiment is undeniable, it has not had a significant impact in terms of the provision of equipment. At the second stage, the municipalities have adopted various strategies that have allowed them to expand their equipment: some have diverted funds from other items, while others have obtained them through specific projects or through submissions to competitive funding programmes. Yet, despite the determined use of these mechanisms, there is still a good deal of improvisation and very little planning.

One municipality, El Bosque, was able to equip itself on a more sustained basis with funding from the Programme for Strengthening Municipal Institutions (PROFIM).⁵ This poor commune stands out from the others in this respect. It used the funds to provide its employees with sufficient computers for their operating needs, it trained them, it standardized programs for handling internal documents, and it formalized the computer systems in use by paying for software licences. It succeeded in developing the Consulta 2000 information system, a computer program designed with a platform for centralizing information on the municipality's social and other services. It also allowed for internal networking to give all departments access to the same information for serving the public. Nevertheless, this possibility was never made use of. The program was installed, but not all employees had access to the internal network, nor did they receive the training manuals. Although 30 employees had been trained to use the program, only 2 were capable of working with it. External users were unaware of the program and the staff responsible for consultations with the public continued to rely on conventional methods. The failure to assign clear responsibilities and the consequent lack of maintenance and updating led to the project's being aborted.

This experiment is typical of the shortcomings found in the introduction of ICTs in the municipalities. Its failure highlights the lack of planning and the haphazard and mechanical approach that has been taken. There was no prior analysis of the structural and subjective conditions that might affect the

adoption of the new systems. Even more importantly, the experiment shows that the difficulties are not limited to a shortage of funding: there is also a management problem, in the failure to plan for an orderly and organized approach to implementing ICTs, with the result that introduction has been fragmentary and uneven.

Despite these clear limitations, we can already recognize the positive impact that new ICTs have had. The most obvious benefits are in the services area, where there has been a sharp improvement in providing prompt attention to the public. There is general agreement on the value of using information from CAS II records and on the enhanced efficiency that the introduction of computers has brought with it. As one of the officials said, "Now all our architects are doing their plans in AutoCAD instead of at the drawing boards."

Third stage: acquisition of other technologies

Once computer outfitting is relatively complete, other technologies start to be acquired. Currently, the municipalities have Internet access, intranet, web pages, information centres, e-mail, and phone service systems. Not all have the same technological resources available, however: for example, El Bosque has more equipment, while Los Andes has less.

Every municipality has a computerization budget; and although the amounts earmarked for this purpose are generally low compared to other items, the fact that there is such a budget is an important indicator of progress in the implementation of ICTs. Several municipalities have actually doubled their computer budget allocations this year. "Today nobody argues if I ask for 25,000 pesos to buy a toner cartridge – two years ago they would have killed me for that!" said one employee.

It is at this point, and with this type of expansion, that the uncertainty of funding has become most evident. During the initial phase of introducing new ICTs, this uncertainty was not really a factor, and employees were content with basic internal implementation. Now the systems being introduced are more complex and require greater investment. Some municipalities do not have the financial means for Internet connections or networking systems. The installation of services remains incomplete, so in most cases it is difficult to provide proper maintenance of the equipment. Technical shortcomings are becoming more evident, and more and more officials are demanding improvements in this area. This means more sophisticated technology, primarily for internal use.

At the same time, we can see a growing maturity and consolidation of the existing equipment. For example, one of the municipalities has adopted a structured training plan: training is no longer offered indiscriminately, and employees are invited to compete for training grants. The benefits of this implementation are also becoming clearer. Employees recognize that, thanks to ICTs, there have been improvements and innovations in municipal services and as a result they feel that a great deal of bureaucracy has been eliminated.

The introduction of other technologies, beyond computers, reveals the interest among employees in generating new initiatives, including some that were beyond the current ability of the process to support. As a result, some have been unsuccessful and have represented wasted efforts. As an example, the commune of El Bosque introduced Munimatic, which offered an automated information source on municipal services. One of the officials related this experience to us: "We set it up in the courtyard so more people could have access to it, but people did not use it because they didn't know how, and there was nobody to show them. They preferred to consult the system inside, although to do that they had to use a keyboard and a screen. Finally we took the computer back – it was a waste of money." This example shows the need for advance thinking about what users can really do with the new technologies offered them.

Today, there are opportunities to secure support from other sources in implementing ICTs. This implies new alliances and the involvement of other players: for example, all the municipalities have negotiated contracts with the private sector, specifically with Telefónica de Chile, for introducing mechanisms such as information and help lines. They also have agreements with universities to offer computing programmes and training for officials. They have expanded their relations with other government ministries, and some municipalities are working jointly with the Ministry of Education and Health.

The creation of web pages is another sign of this expansion. Except in Puente Alto, the municipalities have created their own web sites, although the sites are not yet functioning properly. They face a number of problems, such as lack of clear objectives, a clearly defined audience, and dedicated personnel. For these reasons, the content portrays individual visions rather than a collective view of the municipality. The municipality of Los Andes actually has three web pages. The information in them has not been updated, there has been no publicity about their existence, and those we interviewed dismissed them as boring, uninteresting, poorly done, not reflecting activities in the municipality, and providing irrelevant information.

The lack of interest in this instrument, the web page, among municipal officials is perhaps justified in the sense that the community with which they are working has no access to the Internet. In fact, they see it as primarily targeted at their peers in other municipalities.

The situation shows that the introduction of new technologies at the municipal level has been a slow and difficult process, primarily because the approach has been incoherent and incomplete, with a severe lack of planning. Moreover, the implementation focus has been limited to providing the most utilitarian elements that the new technologies offer, and there has been little interest in taking advantage of the opportunities they open. Efforts have been directed essentially at meeting the internal needs of the municipal government, rather than reinforcing contacts with the users of the services they manage. This has had a negative impact on community involvement and participation in communication processes.

What the municipalities need, then, is to develop an overall vision of the possibilities offered by ICTs. Yet, given their precarious financial situation, the existing burden of work and the shortage of planners in this area, proper implementation will require concrete support in the areas we have described.

Individual narratives

With the introduction of new technologies into society, at and beyond the local level, individual citizens have begun to produce their own narratives about ICTs. These narratives have to do not with the political space or the public space, not even at the local level, but rather with a private world, the world of family. This is where the appropriation of new technologies is given its meaning and where it acquires value. In this context, as in the case of the municipalities, the new technologies translate initially into specific tools such as computers, and then perhaps mobile or cellular phones, or other uses that involve computers, such as Internet access. In other words, for most of the people participating in our research, the new ICTs are concrete objects to which, as we shall see below, they assign certain meanings constructed from the interests of family life.

For the groups participating in this research, the new technologies are not part of either their daily working life or their personal life. Their narratives reflect primarily what they have received from other messages, such as those of the market, politicians or their own children. Poverty and generational considerations have left them out of the loop, and they have no direct personal access to new ICTs. Consequently, most of the narratives collected do not relate to concrete experiences, but rather a representation, a fiction, an idealized image of an object. These people “exist” in a narrative from an imaginary world built around a reality that they observe and develop symbolically (Chillon, n.d.). On that basis, they construct a complex territory in which their beliefs, expectations and intentions converge.

The narratives we collected speak to us primarily of a history of exclusion. Neither men nor women see themselves as key players in ICT innovations. On the contrary, they see themselves as a group that is marginal to ICTs. Thus, when they use “I” they are in effect distinguishing themselves as subjects who are “outside” the world of ICT users, at a distance that varies to some extent according to gender and age.

In the first place, adult males speak of a generational situation where they feel they are “too old for ICTs”. These people may be 35 years of age, and so they were never part of the government education network Red Enlaces,⁶ which has provided massive access to ICTs for children in the public school system. They have no access to ICTs through their occupation or other channels: in short, they do not use them. This exclusion they accept as something of no great importance in their lives. Their vital preoccupations lie in other areas that have nothing to do with new technologies. Currently they are worried about unemployment, about health care and, in general,

their economic constraints. They are interested in ICTs to the extent that they can help resolve these problems, and from that viewpoint they are prepared to learn and to take training in this area. This is not to say that they do not recognize some of the benefits that ICTs offer, as modern tools that could possibly expand their horizons by opening the road to new knowledge, but their reality boils down to this: "We have no possibility of access to a computer."

Another group, of younger men between 17 and 20 years (in Rancagua and El Bosque), experience their exclusion from ICTs in another way. They took part in the initial Red Enlaces initiatives, where they were trained in using computers and the Internet, but that experience had no lasting impact on their education or their lifestyle. In their narratives, these young men were unable to separate their assessment of ICTs from the low opinion they had formed of them in their formal education. That was, to a large extent, a negative experience of which they have unhappy memories. With a certain justification, they see the introduction of ICTs as a continuation of traditional education. They recall that computers were introduced into their schools with a conventional rationale, maintaining the same educational methodology, such as exerting strict control over the equipment. In this way, their feelings of insecurity and resistance towards other aspects of school life were transferred to this new instrument. They feel that the arrival of the new technologies in their schools exposed them to new demands, such as the ability to concentrate and to study, which their limited interest and their tenuous educational background made it very difficult to fulfil. They have little interest in school. Their preferred group activities revolve around sports or *batucadas*.⁷ Based on their experience, they tend to view ICTs negatively and find them uninteresting and boring: "I don't like computers because I like to do things by myself. I don't want a machine to give me the information I'm looking for; I want to go and find it." ICTs, then, take on value only to the extent that they can provide some kind of basic entertainment, such as playing games, or an economic benefit: "copying CDs to sell them".

Behind this indifference and the unease that these young people show towards ICTs, we can see the signs of marginalization and exclusion. Their expressions may conceal the reality of their relationship with the new technologies: they do not have access to them and they are limited in the use they can make of them. They represent a group of people who are "outside the technological loop", a group that is "between two ages": that of the younger children who today have access to many aspects of modernity through the school, and the "older group", whose children in some way represent a connection to this world. The group interviewed is typical in terms of marginalization, since it has no access to ICTs in any space, not even symbolic space. Moreover, its members are technologically illiterate, as are most of the poor of their generation.

The narratives offered by women have their own special features. They also speak of exclusion but – in contrast to men, who recognize and openly

admit their status – their concept of ICTs is not that of something that is feasible in their own lives, but of something that might be possible for their children in the future: “If only we had a computer at home, so the children could use it! They are the ones who have the intelligence and the need to use it.” Of all groups, it is women who are the furthest removed from ICTs. The absence of “I” in their statements about the new technologies, however, does not prevent them from seeing that these tools can be of great value to others – but “not for us, just think what people would say”. As with men, they have no access to the media in their daily lives, and yet it is among them that we find the strongest representation of ICTs as a medium offering new social possibilities, specifically in the field of education.

For both groups, men and women, statements about the new technologies relate to the symbolic space of education. We speak of “symbolic space” in the sense of a “representation” that contains multiple meanings for people, meanings that do not necessarily belong to the object represented. People do not look at computers from their roles as fathers and mothers. They value them for their educational dimension, i.e. as instruments that their children must have access to and know how to use. They see no other possibilities for using them. Consequently, there is a consensus that ICTs must be managed and controlled so that children will study. Any other use, such as for playing games or seeking information, is seen as a waste of time.

In short, for the groups participating in our research, ICTs are a means of access to a good education, part of an important educational phenomenon from which their children must not be excluded. As one woman said, “I believe that for a child not to know computers in the future will be just about like not knowing how to read.”

The importance that participants attach to these technologies as instruments that their children must understand and use in their education brings us to the dimensions of integration and social mobility with which education is viewed in our countries, i.e. as a means of escape from poverty and inequality. This is especially important and “true” for the poorest groups since they have no other means of improving their lot. In this context, ICTs represent a key component of education, a new tool that their children must master in order to get a sound education. From the viewpoint of participants in our research, ICTs constitute the new educational scenario and are endowed with countless properties that make them the guarantor of a solid education. They see their children as the current protagonists of these changes, and they feel that ICTs are giving their children new elements that they themselves never had. They say that, while they were left out, this cannot happen, and is not happening, to their children.

It is the new technologies, and their educational dimension, that hold for this group the illusion of integration and equity. They know that their children have access to ICTs in school, through the Red Enlaces network. For them this is enough because they have no other grounds for assessing the quality of that access. Some parents have watched their children use computers, and

they are proud to see them learning new skills. This is the limit of their assessment – they fail to see the differences with other social sectors that have much more complete and sophisticated access to the new technologies. As one participant said, “My son goes to the Colegio España – it’s well known and it has computers. It may be a public school, but no one can say to him, hey, you’re not in a private school, so you have no idea about computers.” This statement, with which everyone agreed, does not reflect the inequality that is so evident in the reality of ICTs. It ignores the fact that children from higher-income groups have access to better technological systems than those offered by the Red Enlaces network.

An interpretation of these narratives allows us to re-semanticize our own experience through the new technologies. In the presence of ICTs, people’s narratives about their own lives, marked by exclusion, are turned into a narrative of expectations for inclusion through others (their children), and this neutralizes talk of differences and produces an illusion of equality.

The following table demonstrates this point.

Narrative	Player	Situation	Time	Outcome
Experience	Self	Exclusion	Past	Inequality
Expectations	Others	Inclusion	Future	Equality

The collective statements on ICTs, then, represent the following narrative: From a recounting of experience emerges an excluded “I”, which in relationship with the new technologies is seen in the past, and ultimately as the product of a situation of inequality. The strong perception of exclusion that underlines this statement is neutralized with a narrative of expectations, in which the other (the child) emerges in a future situation in which ICTs allow inclusion and therefore open the way to equality.

A new narrative therefore emerges that contains the illusion of equality of opportunity. From the moment the subject assumes that he will have equal opportunity, the same access to ICTs that others have, this transforms his perception of himself: “having” becomes “being”: what I have is equal, therefore I am equal. This situation immediately reduces the feeling of difference and diminishes one’s social distance from others.

García Canclini (1997), referring to Baudrillard, speaks of two distinct types of values in society. As an escape from the confines of the Marxist dichotomy between “use value” and “exchange value”, Baudrillard proposes two further forms of value: “sign value” and “symbolic value”. These two values when assigned to an object bear very little relation to its practical uses. The sign value has a connotation that is associated with the object: a brand-name computer is not the same thing as a clone made from components. Yet what is of greatest interest to us here is the symbolic value,

which has a meaning distinct from the sign value that individuals or groups in any society place on an object. These classifications reflect the logics that govern the circulation of objects in society. The first two values – use value and exchange value – have to do primarily with the material nature of objects. The other two refer to the process of their signification.

For the groups participating in our study, the new technologies have no use value. In their case, non-availability means that this category does not apply. But those instruments are “charged” with a potent symbolic value since they represent a transition to a future in which there will be equality of access and opportunity.

As we have seen, it is in the private sphere that the narrative about ICTs tends to dwell and where people identify their most significant impacts. In their statements, there is no room for the “local space”. In contrast to municipal governments, individual men and women seem incapable of identifying clearly the impact that the changes in this area have had on them. Generally speaking, people perceive their relationship with the municipality as based on the same codes and the same conventional channels as ever.

The relationship between the municipality and the community

One focus of this study was to observe the development of ICTs as instruments for strengthening the bond between municipal governments and their communities. This analysis involves some thinking about the nature of “community communication”. Using a diagnosis of current local scenarios, Fernando Ossandón (1994) defines the concept of community communication as “the set of relationships for exchanging messages and constructing meanings that happen through direct contact, the dissemination of information – through formal and informal means of communication – the delivery/use of services, community participation in the media and campaigns to reinforce communal identity and the like”. This definition, which identifies each of the components involved in the communication process, requires us to understand the communication role both of the municipality and of the citizen, and to question the quality of the bond between the two and the impact that new technologies have had on it.

Municipal governments

As we have seen, in introducing ICTs, municipal governments have failed to move beyond the stage of allocating resources to their own internal development. The rationale underlying this approach has been “to strengthen internal workings so as to be more efficient externally”. Yet this avoids the issue of how to develop a better communication system that is at the service of the community. The changes proposed in this area are still in the realm of good intentions, of projects for the future. For example, the municipal government of El Bosque has plans for what it calls a cyber café: it will place

a computer in the Casa de la Cultura (House of Culture), a place that currently has no access to the Internet and that is still awaiting the arrival of broadband service in that part of the city.

The main forms of communication that the municipal governments generate are in the conventional mode, which is to say they represent one-way communication: messages are transmitted without any thought to establishing a relationship of reciprocity with the recipient, or the possibility of exchanging functions between transmitter and receiver. In this way, communication at the local level has been designed primarily to serve the needs and interests of city hall. Currently, most municipalities use various media for transmitting their messages – newspapers, radio and even local television – but they are used primarily as part of a marketing strategy, where the collective aspect is obscured by individual references, focusing primarily, of course, on the mayor himself. In all the municipalities we visited, we could see that as far as information and public relations officers were concerned their main job was to create and publicize a favourable image of the city. Their efforts were focused on protocol events, ceremonies and other happenings. In doing so, they lost sight of communication as a planned process for placing information at the service of the community.

As a result of this approach, the municipalities have not generated any continuous communication channels devoted to meeting the information needs of the community. The results in this area have been modest, no doubt because so little effort has been devoted to it. For example, in one city our attention was drawn to a newly created notice board as an important step for informing the public about the local government.

Individuals on close terms with the city government indicated that they tend to cultivate personal relations with key municipal officials in order to keep themselves informed. By having “friends” in various programmes, they will be aware of what is happening in areas of interest to them. This means, in turn, that people have no relationship with the city government as a whole, but only with a limited number of officials (one or two) who can meet their needs.

This kind of personalized relationship produces other results that cannot be classified as direct benefits of the kind that the municipality was hoping to deliver, such as the possibility of becoming a space for social encounters and human relationships. One young man told us, “We get along fine; we know people.” The municipality offers a form of social integration that many cannot find anywhere else. Such practices can make people feel close to the municipal government, but at the same time they will be relatively uninformed about what it is doing and will have no way of forming an overall assessment of what it is offering.

The public perception

The ties that are established with the municipal government by means of individual relationships between officials and users have a negative impact

on public perceptions. The municipal officials participating in this study claimed to have technical indicators showing very high performance ratings, and yet they recognize that the community view is not consistent with such ratings. People tend to have a poor opinion of their municipal government, and most are unable to recognize the benefits that it provides. The men and women who attended our focus groups were recipients of some of the services offered by the city, such as employment counselling, remedial education, sports facilities and training in non-traditional occupations. This means that they were gaining direct benefits. Yet, they were constantly critical of the management of municipal governments. They saw them as not very effective – lack of information, long waiting time, red tape, surly service – and felt that the requirements for obtaining benefits were too onerous.

Beyond the lack of information, the negative perception of municipal governments is reinforced by other long-standing municipal practices that have yet to be eradicated, for example the ideological factor that determines the relationship between city hall and organizations that have dealings with it. When their political stances coincide, the relationship can be mutually fruitful, but it will not be if they are at odds. In this case, it is the community organizations that have the most to lose, since they will be left outside the information loop generated by personalized networks.

This situation was exemplified by the community organizations working with the municipality of Puente Alto. At the time of our research, the newly elected mayor was from a party opposed to the positions endorsed by members of those groups. In the focus groups, they complained that they were completely cut off from municipal programmes and activities because the mayor refused to meet with their leaders. As organizations, they were left with no information, and this gave rise to many rumours: “we hear they are going to do away with social programmes”, or “they say they are going to work with a different kind of organization”.

A new relationship

The picture described here presents a kind of relationship between municipal government and community based on an approach that is not very democratic and that fails to take full advantage of the possibilities of community communication. This suggests the need for a different approach to management, one that pays greater attention to the right to communication, something that is currently lacking in the municipalities. Indeed, the right to communication needs to be upgraded to an essential right of citizenship.

The right to communicate has both an active and a passive component: the right to inform and the right to be informed, to be a transmitter and a receiver. The right to communication is broader than, but includes, the right to information (Servaes 1998). In turn, people's right to communication, considered as a basic right in terms of public affairs and participation, includes rights and responsibilities that are both individual and collective.

This brings us directly to a new understanding of community communication, which, depending on its quality, will either encourage or frustrate community participation. In this context, information, which is a constituent part of communication, becomes a participatory act and must be guaranteed as a right and a responsibility for each of the players in the communication process. This approach demands a broader concept of participation, which will be incomplete unless its ultimate goal is to perfect the communication process. The right to communication is no different from the right to participation.

From this perspective, the new technologies take on an importance that demands a transformation in the logic by which the partners in local communication work and relate to each other. Municipal policies for promoting participation must move beyond the requirement that participants be physically present for participation to occur, a requirement that belongs to an outdated kind of relationship. In other words, there must be a change to the traditional focus as a result of which, in the communications field, policies for creating participatory spaces were passed over in favour of mounting countless "events" that left little space for effective, thoughtful participation (Silva 1999). If they adopt this concept of participatory communication, municipalities and communities can establish a more fruitful relationship in which ICTs can have a new impact.

Conclusion

ICTs are sparking a worldwide revolution, a revolution that revolves around information. This means new languages, new instruments and new technological facilities that will yield great benefits but that also imply significant costs. Information has acquired a new value that, depending on how accessible it is, can signify integration or domination, opportunity or exclusion. This worldwide phenomenon of communication is inserted into a specific national context, with its own characteristics, one of the most dramatic of which is inequality. We are referring to social, economic and cultural inequality that remains indelibly stamped on our country and that manifests itself in various ways. It is this context that gave rise to our research objective: to produce knowledge about the impact of ICTs at the local level and specifically to observe how they can be transformed into an instrument for citizen participation and empowerment.

Our examination of the situation in several municipalities and the groups that relate to them suggests the following conclusions:

- (a) The new ICTs are not yet being used to strengthen relations between the municipal government and the community (represented in this study by people with ties to the municipalities) or to foster participation.

- The ICTs have been regarded primarily as synonymous with computerization, and the introduction of ICTs has therefore focused on the mass provision of computers.
 - Municipal governments have introduced the ICTs with a utilitarian, mechanical rationale, aimed primarily at improving services rather than at fostering citizen participation and empowerment.
 - Municipal social services have not been considered as a priority area for installing the new systems. This has led to inequality in the distribution of ICTs within municipal departments and programmes.
 - The people participating in this study, representing low-income groups, have no access to ICTs in their daily life.
 - In addition to the foregoing, there are economic constraints and management problems within municipal governments that have delayed and fragmented the introduction of ICTs. The lack of planning has exacerbated the haphazard approach to introducing the new systems in municipal governments.
 - The foregoing has meant that key aspects of this undertaking, such as highlighting the fundamental role that ICTs can have in establishing bonds between municipality and community, have not been considered. Community empowerment, broad and efficient channels of information, and citizen participation, understood as impacts of ICTs, are dimensions that have only recently begun to receive attention in this scenario.
- (b) ICTs have a community impact that is independent of the municipal government.
- The impact of ICTs crystallizes in the private rather than the public sphere. Participants are unaware of what municipal governments are doing in this area. ICTs have meaning for them only in terms of educational possibilities for their children.
 - Citizens' perceptions about ICTs reflect both current exclusion (for adults) and future inclusion (for their children) through education. Their children are enrolled in public schools, through which they have access to ICTs.
 - ICTs are equated with education in the opportunities they hold for promoting social inclusion. They take on symbolic value. Computers, specifically, are valued for their educational dimension. There is no perception of other uses for them.
 - Introducing ICTs as a route to social inclusion changes the way people speak about their lives: talk of exclusion disappears and talk of equality emerges. In their narrative, they do not distinguish quality of access to the new technologies, and the mere fact of having access banishes (symbolically) the differences that they express in other settings.
 - This produces a perverse logic: the belief that common access to the new technologies will generate equality.

- (c) The issue of ICTs as a communication instrument to promote participation has yet to be addressed.
- Participation is not necessarily or solely dependent on physical encounter between citizens and the municipal government (in information sessions, events, “town hall meetings” and roundtables).
 - A logic must be established that understands communication – based on information – as participation: by informing and being informed (i.e. communicating), people participate.
 - According to this logic, ICTs become fully functional: in this way they acquire their real use value and are not distorted with the symbolic value that is accorded to them as a result of exclusion.

Finally, we believe that the following conditions must be met:

- A transformation in the approach to working with and managing ICTs, especially in terms of citizen participation and the communication dimension.
- Access to ICTs which calls for planning and installing equipment, programs and content. It is these instruments that will broaden the forms of access to information.
- Access to information. Inequalities in this area create inequalities in levels of participation and therefore in citizen empowerment.
- Training in the communications area, which must include ICT considerations.

Notes

1. Presidential address on the state of the nation, May 21, 2000. Ministry of Communication and Culture, Government of Chile.
2. The research was conducted in four municipalities in the following communes: El Bosque (urban and poor), Puente Alto (urban, middle-class), Los Andes (rural) and Rancagua (urban).
3. The term *technical-communicational* is used because the driving force behind the development and dissemination of new information and communication tools have not been solely or even primarily communicational.
4. Ministry of Development and National Planning <<http://www.mideplan.cl>>.
5. PROFIM is a government programme to improve municipal management and the quality of municipal services provided to the community.
6. The Ministry of Education undertook this experimental project with information technology and digital networks for publicly supported schools in Chile in 1993, as part of the education reform.
7. *Batucada* is a word of Brazilian origin that is used in Chile for groups of youngsters who turn out at political demonstrations and liven them up by beating drums.

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