

Is communication a strategic resource for digital commodities?

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Resumo

Tentaremos demonstrar a validade da aplicação de um esquema (ou modelo) de análise comunicacional que apresentaremos aqui para a abordagem de certas características da criação de mercadorias simbólicas na Economia da Informação (EI). Acreditamos que uma abordagem a partir da comunicação ajudará a entender vários processos econômicos que se encontram no coração da EI – como a mercantilização da informação –. Não somente nos extremos do processo econômico, ou seja, na produção e no consumo de bens e mercadorias, como também no processo intermediário da circulação. A EI em certos aspectos se separou e até certo ponto se tornou autônoma da economia ‘real’ e de suas práticas tradicionais de produção, assumindo, por conseguinte, uma forma nova e específica de mercantilização (comoditização) do processo de comunicação.

Palavras-chave: TIC’s; esquema de comunicação; valor; comoditização; Economia da Informação (EI).

Abstract

We intend to demonstrate the validity of analyzing some characteristics of symbolic commodity creation in the Information Economy (IE) applying a communication perspective, for which we will present a communication scheme (or model). We believe that communication sheds light over several economic processes - such as commoditization of information - that are at the core of IE. Not only in both ends of the economic process, that is to say: in the production and the consumption of goods and commodities, but in the ‘middle process’ of circulation. IE has in certain aspects separated and became almost autonomous from ‘real’ economy and its traditional practices of production, therefore assuming a new and specific form of commoditization of the communication processes.

Keywords: ICT’s; communication scheme; value; commoditization; Information Economy (IE).

Resumen

Intentaremos demostrar la validez de la aplicación de un esquema (o modelo) de análisis comunicacional que presentaremos aquí para el abordaje de ciertas características de la creación de mercancías simbólicas en la Economía de la Información (EI). Creemos que un abordaje desde la comunicación ayuda a entender varios procesos económicos que se hallan en el corazón de la EI – como la mercantilización de la información –. No solamente en ambos extremos del proceso económico, o sea en la producción y el consumo de bienes y mercancías, sino también en el proceso intermedio de la circulación. La EI en ciertos aspectos se ha separado y hasta cierto punto tornado autónoma de la economía ‘real’ y sus prácticas tradicionales de producción, asumiendo por consiguiente una forma nueva y específica de mercantilización (comoditización) del proceso de comunicación.

Palabras llave: TIC’s; esquema de comunicación; valor; comoditización; Economía de la Información (EI).

The centrality of the circulation process.

We will be like gods that perceive the beginning and the end at the same time, we will be simultaneously everywhere, but that plural contemporaneity will serve us little. A media utopia will disappoint us, as all utopias did. We will want to return to the old times, but it will be impossible. Maybe we could return, but not swimming as in a river, but sited in our desk. With the acceleration of immaterial images we will be nearer the final time. We could be

everywhere, but it won't serve us because we will be immaterial as someone who observes, not someone that lives. Vilém Flusser, 2009 n.d.

The proposition we rely on is that the overwhelming importance of the circulation process (of information, symbols, icons and virtual values) not only provides an infinite resource of information, but is also capable of producing value, including capital. It can promote shared space for public opinion or the private appropriation of 'social, cognitive or emotional (meta)capital' (information, culture, psychic cultivation of subjectivity and reflexivity). And it also provides basic conditions for commodity production. We present this process through three dimensions of communication: referenciation (construction of reality and virtual objects through language); inter referenciation (mediated interactions between social agents); and self referenciation (permanent loops and reference to objects, languages and agents in relation to themselves as identities and the whole process as a 'closed' recursive system). Language, messages, meanings and symbolic goods circulating in the system are transformed into commodities. Information and communication are the basic inputs of a never ending circulation process which itself represents value creation as a 'referencial' commodity, emerged through the socio technical circulation processes in the whole social system.

In this paper we intend to demonstrate that Information and Communication Technologies (ICT's) are not only a fundamental cornerstone of what has been called the Information Economy (IE)¹ (cognitive capitalism, or informational capitalism), but a socioeconomic system of production which for the first time in history has introduced symbolic and communication processes as both a core resource and a commodity in the production and consumption at the heart of the economic system. We intend to relate methodically three different dimensions of communication to the processing of information as commodities. IE has been born in the process of transformation of the industrial economy into post-taylorist forms of production, centered in the changing relations between organization of labour and forms of production, as well as the promotion of innovation and creativity in mediated cultural and artistic experiences.

Social communication processes are appropriated, 'processed' in multiple forms and transformed into commodities through ICT mediation devices and displays capable of registering and resending merely data and information through algorithmic programs, or transformed into messages, media products, propaganda, etc. ICT's are capable of recreating actions and operations circulating in new scales of time and space (both physical and virtual). In the growing (IE), work and production of goods and objects need not be physical any more (it is mostly the consuming process of a good in the market place which 'materializes' the value and the 'reality' of a product, not its intrinsic ontological nature, as virtual objects are obviously real even if not material). Their 'nature' can be made of digital binary signals, signs, icons, sounds, data, mathematical and logarithmic calculations and operations, etc. Any material object or commodity produced industrially can be re-produced unlimited number of times and at different scales through robotic or ICT processing techniques, programs and procedures. Any physical reality can be 'transformed' – or translated - into a digital or virtual one, producing an effect of verosimilitude. Practically the whole of the virtual economy and the financial markets rely on the application - and replication - of mathematical programs, algorithms and probability calculations through devices capable of networking in a global market place. The velocity and the leverage of stock markets grow due to computer programs that 'decide' when to buy or sell stocks automatically at predetermined prices, multiplying the circulation and speculation in the stock markets. In this case, would this allow us to claim the circulation process by itself is capable of producing value, divorced from any kind of

human work or intervention?

On the Internet, search engines and devices allow looking for specific information over any kind of objects, products, people, events and anything circulating in the social networks. The processing of data can be specifically programmed to search for strategic information over individuals, groups, political parties, governments and any kind of situations. From a sociological point of view, is this simply 'spying', or a normal technical process of information gathering? In other words, naturalization of the process eliminates human responsibility and 'morals'. And mediatization of society tends to deepen awareness of this conflict, which since Assange's revelations an 'era of ingenuity' has ended.

Besides individuals and scientists interested in the gathering of information, there are two kinds of social agents that represent the most huge and powerful institutions of our times: government and corporations. The first gathers information for the administration and centralization of power and control, constructing what we may widely call 'political commodities', or a kind of 'metacapital' (in the words of Nick Couldry, following Bourdieu's original proposition of field theory, 2003/04). The 'political metacapital' is produced collecting data and information mostly associated – or useful to –overwhelmingly powerful public institutions (such as justice, the military or police)². This kind of 'commodities' may represent an exchange value, but their specificity is mostly related to power³, control and social regulation. In this paper we are interested in the second system: the economy. What 'dimensions' of communication are relevant, and how does information transform into a commodity?

A tridimensional scheme of communication.

We have presented in books and papers (2003, 2007, 2012) a 'model' articulating different dimensions of communication in the construction of meaning. Its purpose is to have a conceptual scheme of communication to approach broad and different social practices methodically, such as value and commodity creation.

"We can consider at least three logical constitutive dimensions of any communicative action: referencial, inter referencial and self referencial" (Vizer, 2006:114) . The first as a human and mostly linguistic capacity to construct discursive 'symbolic realities' (the 'contents', or what we are speaking about). The second (inter referencial) is the implicit construction of relations between social agents that intentionally 'refer' to each other, building a context through their actions (or the question of how do actors create a shared context through their interactions). Social life is 'constructed' through relations with others to whom we direct our attention and of whom we expect mutual correspondence.

Finally, self reference approaches eminently socio subjective processes, for instance the self conscience we have of being observed by an Other that is also conscious of his being observed. Self reference is also a metaphor for the symbolic creation of identities and personality: who am I to myself, who I am in the eyes of others, who are the others to me, etc. This processes apply not only to individuals, but as they are socio symbolic and institutionalized by language and images, they function as socio cultural collective processes as well (publicity and political advertising aim to construct identifiable marks and values related to economic or political identities, in order to produce social and semiotic recognition associated to values and decision making towards them).

It's the construction of an entity as both an individual and a social agent looking for recognition (who is speaking).

We can take as an example the 'magic' of sports – football above all -. The magic lays in the fact that the physical divorce from the passivity of the viewer and the activity of the subjects on the screen, gives place to a fascinating and magical bond between both through the absolute identification of the viewers with the players and among themselves in an imaginary collective communion with each viewers team. The stillness of the attention to the movements of the players on the screen is suddenly broke by an explosion of shouts and emotions. Imaginary identification happens by the recognition of symbols and the empathy of shared emotions. The subjective process is fed by an imaginary inter-referenciation with the team players (the viewer as a member of a club or an organization, shouting and encouraging the screen players with which the viewer identifies himself). This phenomenon is the predecessor of computer games, in which the players establish a mediated and real exchange and inter referenciation process between themselves. The computer screen presents all the elements of the game digitally in a virtual space, but the game and the time spend in it is real. The actors establish authentic bonds between them as the devices are operated by themselves. The referenciation process is essentially virtual even if the signs and sounds are real and accesible to the participants of a network. ICT achieve an authentic and revolutionary impact in the mediatization of social relations. Considering two levels of human computer interrelations, one 'technical' and a second of meaning – or semiotic - we can see that the technical and operational devices have gained a fundamental relevance, and the construction of meaning processes depends mostly on the sharing of adequate information and operational tools, codes and programs. Technological culture has established itself as a hegemonic referential system of mediated social relations, as well as an instrument for self reference and recreation of values and identity, both in social and virtual realities. When tackling the 'digital divide', these questions have turned the most relevant democratic and educational target for all peoples and nations over the world, the strategic relevance of technological culture know-how has turned universally evident.

From the perspective of a strictly socio communicational and relational analysis, the logic of referencial dimension is generally expressed through language, gestures, drawings, use of metaphors and symbols, and referring to discursive construction and information devices for constructing object representations. The inter-referencial dimension refers to the logical fact that when we speak we speak to someone, to somebody that can be physically present or not – as in the case of technical devices of mediation -. It is this dimension to which we refer as dialogic, and I prefer the notion of inter-reference to the classical and empiristic notion of interaction. While this last word is significantly familiar to 'connectivity' when some researchers and engineers compare mediated society to a connected web, the first notion refers to a human subject as an observing and observed active social actor, as an agent in a relation of co-construction of an habitus (Bourdeiu), or a shared and commonly cultivated environment (Vizer, 2003, 2006: 250, auth. transl.)⁵

In advertising - central to the IE markets - the tridimensional scheme opens the possibility to articulate different sets of communication situations and problems relating them to their meaning: the referential dimension pointing to questions related to what is said, what is constructed as valuable; the inter-referential to how actions and interrelations between actors are realized, and how meaningful texts or object-messages are socially constructed. And the self-referential dimension points to questions related to who the participants are and how they construct themselves and

their identities in the process. So, three kinds of generic problem-questions can be proposed relating communication to kinds and types of information value construction: who is communicating, how do they communicate, and about what they communicate on. The distinction between them is a fundamental input for the construction of information campaigns, propaganda, education, health and symbolic commodities circulating in society. Its results are imbued in all social media messages, activities and processes. Information and data about who is communicating, how and through which channels and media, and what are the contents about the different people communicate on, are the most valuable resources for the proper “buyer” of the information product. Collecting data about any kind of circulating messages in social media is like fishing in a pond. Worthless everyday communications can be collected and transformed into valuable resources of information for economic reasons or political, administrative or control purposes.

Communication, mediatization and commoditization in Information Economy

The emergence of ICT inaugurated the digital manipulation, control and circulation of signs, information, cultural products, physical operations and movement regardless space, distance or time. This process gave a premature birth to the ‘new economy’ (which collapsed in the 2.000). A central characteristic of present post-industrial economy is the production and circulation of digital information and symbolic goods⁷. Circulation of data, information, know how, learning kits, teleworking activities have become fundamental user value activities. A central issue for Political Economy is the complex articulation between material production and immaterial economy, in which the circulation process - and unlimited reproduction - diminishes the value of an original product. The circulation of replicas tend to promote creation of new degraded forms of value. In financial markets this new ‘values’ are just mathematical and information figures (as in the case of financial derivatives, inflating or devaluing leveraged speculative bonds in market bubbles). Classical economy will have to redefine the concept of production, as creating value tends to be associated to the process of reproduction inside the circulation process in itself.

The traditional discussions about forms and levels of control in the markets also correspond to a discussion about intervention over the circulation of information. A real free market would require a corresponding free circulation and access to information, which doesn’t exist anywhere else than in the books of some economists and ideologists. Classic economy was founded over concepts related to value of production, cost of labor, capital, exchange, etc. With the growth of the information sector of the economy and the inclusion of knowledge and information processes imbued in the production of goods, information has become an invaluable commodity. And the word invaluable is here used literally. Information and circulation are almost impossible to measure directly, evaluating them in relation to their cost of production (some authors use concepts as ‘symbolic analysis’ and ‘immaterial work’ related to a marxist perspective). The 2008 crisis probably would have never taken place if the global market financial system wouldn’t have used and abused uncontrolled speculation with derivatives (which one could ask naively from where are they ‘derived’). ICT played a fundamental role not only in the fastness and the scale of the crisis, but also in the internal logic of re-feeding it, as the whole banking system depends on computer programs and communication devices. Related to this we have the example of the implosion of the dot.com companies that flourished until the 2.000. Some years later, we experienced the overexpansion of the bank credits and unlimited speculative operations that led to the junkbonds and the real estate market explosion in september 2008.

Cognitive or information economy can produce for either segmented and limited niches

of the market, or for massive demands of virtual goods, information and symbolic products and values. The post-industrial economy is growingly based in the construction of communicative relations of production and consuming, which we need to interpret in its complex articulations between different dimensions in the construction of meaning and their transformation into commodities (more specifically market commodities). We can mention as a specific example the marriage between culture and economy through the traditional concept of cultural industries, which is being replaced now days by the term 'creative industries' and creative economy. If cultural industries correspond to the early XX th. century stage of massive media and massive consumption, creative and content industries correspond to the present stage of articulation between digital and convergent platforms, added to the multiplication of communication devices and the world wide web (the creative production of media services and products for cell phones is already considered the 'fifth generation' of the production of contents, evolving from the first texts in printed media, the spoken word in radio, the moving images in cinema and television, and now the production of contents for cell phones).

In IE, communication as well as education, can be considered an abstract or immaterial form of labor (for instance in the formation of human capital). The production and circulation of information and accumulation of knowledge not only requires years of investment in formation of intellectual workers, but also learning of information processing and communication skills. So let us now summarize aspects of our socio-communicational scheme and some of their implications:

a) Due to ICT, a growing process of mediatization of society is taking place, which means creation of goods – values – which are produced and appropriated through circulation. An unlimited universe of objects and messages are produced, consumed, processed and stored as referencial user values (in the form of semio linguistic resources and operations, acts, texts, images and information). ICT's – as the infrastructure of cyber culture - are a fundamental mean of production and circulation of symbolic values and goods. Our quantitative and qualitative growth of referenced (both real and virtual) worlds become an indispensable set of 'stored metacapital' experiences. They are indispensable for our lifeworlds (if associated or dependent from physical capital, they become an infinite set of commodities).

b) We live in human - and technically - cultivated physical and social environments. In inter referencial relations (whether face to face or mediated) the interplay of social interaction assumes the form of emotional sharing, and sometimes mutual intervention and appropriation among subjects – or even deliberate manipulation -. Political and economic propaganda feeds itself with permanent recollection of strategic information about socio cultural patterns of interaction and networking. When politics or social relations are consciously intended to bring advantages for only one part, we can consider the other part is being used as a social commodity.

c) Finally, communication implies the capacity to cultivate self reference. This is to say: expression of subjective emotions, attitudes and intentions through different ways of verbalization, gestures, linguistic terms, body language, etc. Communication implies the capacity to refer (externalize) the 'internal dialogue' – as Max Scheler suggested –. There exists a subjective form of work from which innovative ideas, messages, information and products can be created. Creativity is a key concept when economists refer to creative industries and to post-industrial forms of labor and production. Media mass production for different global publics is unconceivable without knowledge of psychological, social and cultural models of identities and character creation.

Communication permanently recreates our life worlds, our symbolic environments. It is also the inexhaustible and richest resource for the creation of cultural values and goods, always in risk of being transformed into commodities. More than an information society, we have to admit that 'reflexivity', permanent innovation, and the paradigm of an information economy should be referred to as a 'communication' paradigm of production and society, or a communication society⁸. The process of production and circulation is a communication process, mostly when the products are objects which the public and the market perceive and internalize as significant information, presented to the public by the media, publicity, and cultural representations.

Post industrial production requires all of these sophisticated communication skills to be able to compete in a market where services, attention to the client, creativity and imagination, immediate response, understanding and interpretation of unexpected situations and problems are a fundamental part of the image and the value of a product, a company, a name in the market. New forms of labor, and new jobs have appeared: pollsters, publicists, journalists, market researchers and planners, developers, the growth of tele education and so on. The information and communication process imbued in any product adds value to it. Henry Ford didn't understand this new economy when he insisted in making only black cars. As an engineer, his creativity was for serial processes and chain production for the masses, not for specific publics and symbolic values, as required for the present 'niche' markets, where uncertainty and opportunities go hand in hand with creativity and the design of new products.

Finally, we have to remember again that anything that exists or happens in any order of reality can be transformed and translated into data, into bits of information which in themselves can be reversed again into multiple languages and texts circulating in different platforms and media screens. In terms of our communication scheme: anything can be transformed into an object of exchange and referenciation, a resource for communications commodity production.

On the other hand, circulation of information and communication commodities not only affects human interaction and human machine interaction (virtual inter referenciation), but the psychological and mental conformation of humans, their self image and identity, expressed obviously in what we name as self referenciation. In the circulation of images and texts in the cyber world and in advertizing and propaganda, identity is probably the most valuable psychological asset of communication practices. Different models and paradigms of identity are built as referencial consumer brands of personality: in partner search, in work, in leisure, lifestyles and education.⁹ As Richard Hall argues "inside the University, the deployment of technologies, technical services and techniques enables education and academic labor to be co-opted for value-production". And continues

"As a result, academics and students are defined as entrepreneurial subjects with limited power-to produce a world beyond value. A question is the extent to which pedagogical and transitional alternatives might be described, and whether in the process it is possible to uncover ways in which education might be used for co-operation rather than competition, as a form of resistance" (Hall, 2015:).

Commodity production and consuming has become almost a transcendent religious practice of contemporary capitalist technological culture mode of production. We will resort to the above mentioned conference, Hall (2015) once again

“In the Grundrisse, Marx argued that the circulation of productive capital was ‘a process of transformation, a qualitative process of value’. As capitalists sought to overcome the barriers to this transformative process, they worked to revolutionize both the means of production via organisational and technological change, and circulation time via transportation and communication changes. Reducing friction in the production and circulation of capital is critical to the extraction of surplus value, and Marx argued that in this transformation ... the annihilation of space by time becomes an extraordinary necessity for it, [and]... ‘Capital by its nature drives beyond every spatial barrier (Hall, 2015:)

ICT’s surely represent the most ingenious and powerful resource created by man to conquer space, creating new forms of virtual space and a limitless expansion of the present through time manipulation.

A great discussion of our days is whether the purpose in this unlimited growth of technologies remains as a possibility for the expansion of human values of liberty, personal expression, welfare, etc., or if it has to be subdued and subject to market values. On the visible landscape of economy, the purpose is the obvious production, circulation and consumption of goods, and the less visible landscape is that of production of a marginal growth of the original capital invested in resources, work, time, etc. Digital economy diminishes the cost of the latter, and when the purpose is to construct virtual goods such as in culture and creative industries, in education and leisure, its costs are practically reduced to a minimum. The most valuable resources are data and information, which are mostly circulating in the web, in social networks or saved in the cloud. Most of the actual work required corresponds to search, analysis, recombination, etc., which is to say intellectual and cognitive work, up to now practically impossible to be measured in ‘objective’ numbers. This means there is a conflict between the actual production of information and communication goods (values) and their market value. In other words (or from a political economy perspective), a conflict arises from a user value communication – which is free and unlimited – and an exchange value communication which is constrained and subject to conditions imposed by the economic system and market rules. Exchange value is abstract value corresponding to commodity construction in the market of the capitalist system or mode of production, - which in itself can be considered an ideological exchange value presented as a user value for political purposes -. According to Postone, value is “abstract, general, homogeneous”, whereas use-value is “concrete, particular, material” (Postone 2003:90).

The commodity logic fetishises the concrete and veils the value as abstract social relation that underlies the commodity. In commodity fetishism, the abstract dimension appears as natural and endless, the concrete dimension as thing without social relations Capitalism requires for its existence both money and commodities, value and use-value, abstract and concrete labour. Money mediates commodity-exchange, so money cannot exist without the logic of commodities. Commodities are made for being exchanged. Money is the general equivalent of this exchange of commodities. So commodities cannot exist without exchange-value and a general equivalent. Another way of expressing the dialectic of commodity and money is to say that the sphere of commodity production exists in relation to the sphere of circulation and vice-versa. (Postone 2003: 91).

Now we can take a look from the perspective of the three dimensions of communication we

have above-mentioned: referenciation of information, messages and products, inter referenciation or interaction between people and the practices of self referenciation. For the first dimension we can refer to a permanent growth in the production of objects and symbolic values (knowledge, cultural metacapital, etc.). For the second dimension we are thinking about circulation and interaction in terms of a permanent present time that flows and not only cannot be stopped, but stopping it wouldn't have any sense. And secondly of an unlimited virtual space, all possibilities brought up by digital Information and Communication Technologies. The third dimension in actual capitalist society is realized in the consumption process, in which consumption, ego and personality building are indivisible. If for the second dimension we think about social interaction and social networking as typical examples of mediated interaction, for the self referential dimension we think about personal exposition and personal expressions in Internet, media and television shows. In these cases, money and social values creation seem to go hand in hand and combined to a mutual feedback process.

Finally, we can state that if human communication is conceived as a three dimensional process regarding expression, interaction and self expression construction (production of messages, circulation through exchange, and consumption as interpretation), when communication is reduced to a commodity or an object of exchange in the market, the social dimensions of human interrelation and the construction of individuals and their subjectivity, degrade or even disappear in the process. They are subdued to the commodity and exchange value circulation processes which permeate human relations and personality in the present capitalist mode of production. The fetishism of communication as a commodity object is established in the minds and the social representations of the whole social system. All we can see is the final 'product message', not the social interrelations and the subjectivity revealed in self referenciation. Of course, we can see the objections that can rise to this questioning. For ex., superficially any consumption of cultural goods could be considered a fetishist practice because we don't take into account the social aspects (as in leisure time for instance), but the abyssal difference arises from the difference in social practices: consuming of goods is a normal 'economic' practice in modern societies, and social communication an anthropologic biosocial and natural conduct of all humans. Of course we refer to the latter. We can also post the argument this way: consuming is 'internalizing' a needed object, as for being 'used by others benefit', is a way of being 'consumed' and transformed into an object by others. The citizen is being transformed into an object of use, an exchangeable value in the market.

It is interesting to remark that intelligent cellphones open a great possibility of recombining the three dimensions in the hands of each user with a greater autonomy in regards to the economic market constraints. Everybody, at any time or place, is theoretically able to produce any message value, interact with others and express its personal needs and opinions regardless external opinions. Collaboration between people through technology opens an extraordinary set of possibilities (of course, this collaboration can be a creative work of research by scientists or students, but it can also be a joint project of sabotage, of terrorism or criminality, as technology is never neutral). But the price of this freedom and independence is a permanent control of the individual through 'connectedness'¹⁰. Using a cellphone is equalled to declaring all the time where I am, where I go, or what do I say and to whom. So we can say the bond with an external system is overwhelming, and this system is not only economical, but political. In Communication terms we can say that if the media system of the Twentieth Century can be represented as a "one to many" model, the modern ICT's have opened the growing possibility of a democratic "all to all" model of communication, but have also deepened the loss of privacy, and the danger of a permanent and omnipresent control

model of “all to One”, whoever this One is.

Notes

1. Hereafter referred to as IE Information Economy.
 2. Nick Couldry, *Metacapital: The Incompleteness of the Media Field* “There is little doubt that, as a sphere of cultural production, the media can prima facie be analysed as a single field, or a collection of fields, (each) with a distinctive pattern of prestige and status, its own values. Indeed, according to Bourdieu, the media’s intermediate position between the cultural and economic poles of the wider cultural field gives it a particular interest as a field. This section notes the positive contribution of field theory to media analysis, before identifying a key tension in its treatment of media power” (2003/04).
 3. In “El ojo de Dios: conectados y vigilados. Los medios como ecología del poder” (The eye of God: connected and watched. Media as ecology of power, author transl.). In this paper we have outlined a short historic periodization of the relations between media, power and social control. (Vizer, E. & Carvalho, 2014).
 4. According to Peirce “the three conceptions of reference: to a fundamental principle, the reference to an object and the reference to an interpretant are fundamental to at least one universal science, logic. It is said logic deals with the second intentions as applied to the first ones” (Peirce 27, 2001).
- According to Nick Couldry: “Reference for a philosopher, or for a linguist, is a relation between an element in a language, like the word John and something in the world (its ‘referent’), such as the flesh-and-blood person John. One half of the relation is a bit of language; the other half of the relation is not. (For some philosophers, but not all, this relation is mediated by a psychological entity, a person’s mental image, or concept, of the thing referred to.)” (p.83)
5. Vizer, Eduardo A., translation of *La trama (in)visible de la vida social: comunicación, sentido y realidad*. Ed. La Crujía, Buenos Aires, 2ª. Ed. 2006, p.250.
 6. Including the growing markets of ‘personal experiences’ such as tourism, pornography, self promotion, participation in virtual communities, etc.
 7. This is a central problem dealing with the political economy of information society (Informational Capitalism). The ways of calculating the value of work has separated from the measurement of time spend in its production, and the velocity and appropriation of information by the public through the circulation process favors the generation (production) of social and economic values separated from physical work.
 8. In several papers (Vizer, 2003, 2008, 2012) we maintained that the concept of information society should refer mostly to the technological ‘infrastructure’ of hardware and ICT operations, mostly due to expert systems, but a ‘soft paradigm’ of communication society is more adequate to describe the dynamics of sociocommunicative practices that characterize our hyper mediated social relations in present societies. The ‘communication society paradigm’ connotes images of libertarian, emotional, sensitive and more democratic social processes.
 9. For instance, education can be viewed as a practice centered in the formation and enrichment of the students, or merely as busyness. The students are prepared according to the ‘ideology’ of the institution, that is to say, prepared for cooperation or for competition in order to confront a competitive market.
 10. Connected. The digital panopticum. “We want to show how the convergence between multiple

systems and networks through which all the information that is produced in any place of the world circulates, and the development of elaborated search programs and the processing of that information, enables and promotes processes of concentration of information in superorganisms". Vizer, translation of the auth. in *Lo que McLuhan no predijo*, La Crujía, Buenos Aires 2014 (288/290).

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