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INFORMATION AND COMMUNICATION: TECHNOLOGICAL AND SOCIOPOLITICAL INNOVATIONS FOR THE SOCIALY CONSTRUCTED REGIONAL PLANNINGS¹

INFORMAÇÃO E COMUNICAÇÃO: INOVAÇÕES TECNOLÓGICAS E SOCIOPOLÍTICAS PARA O PLANEJAMENTO REGIONAL SOCIALMENTE CONSTRUÍDO

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Abstract

This article proposes a discussion on innovation allied to the social value given to information and communication, guided by classic and current contributions about innovations and perspectives of regional development and its planning. It adopts an exploratory and descriptive methodology, supported by bibliographies and information on platforms and interfaces for sharing geospatial information, questions, and discussions about the need for a critical view of innovation policies, going beyond the promotion of technological innovations at the exclusive service of market interests. Thus, it is necessary to think of possible innovations of a sociopolitical nature and cooperative arrangements for a planning and development which are socially built and necessary.

Keywords: information; communication; innovations; planning; regional development

Resumo

O artigo propõe-se a discutir a questão da inovação aliada ao valor social dado à informação e a comunicação, orientado por aportes clássicos e atuais acerca das inovações e de perspectivas do desenvolvimento regional e seu planejamento. Adotando metodologia exploratória e de base descritiva, com apoio em bibliografias e informações sobre plataformas e interfaces de compartilhamento de informação geoespacial, chega-se a questionamentos e discussões a respeito da

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necessidade de uma visão crítica das políticas de inovação, indo além da promoção de inovações tecnológicas a serviço exclusivo dos interesses de mercado. Nesse sentido, suscita-se uma reflexão sobre possíveis inovações de natureza sociopolítica e arranjos cooperativos para a construção de um planejamento e desenvolvimento socialmente construído e necessário.

Palavras-chave: informação; comunicação; inovações; planejamento; desenvolvimento regional.

Introduction

The issue of innovation regarding society and regional development is in the center of a contemporary debate about the directions of public policy of a territorial nature and the planning that goes with it. What is being discussed is the fact that innovation has become a paradigm of the techno-liberal order (GARCIA, 2019), promoting competitiveness among countries, regions and cities and the opening of new markets. The orientation towards innovation goes back to the thesis of creative destruction as an essential fact of capitalism which has been closely linked to private control of the economy and scientific-technological policies since the end of the 20th century (GARCIA, 2019), and is constituted as a political construction developed by States, national and supranational agencies, universities, and large companies. These trends are fully justified in the context of a society that organizes itself in real time (ROSNAY, 1975), the great innovation inherent to contemporary globalization. In this period of social and productive acceleration, multidirectional and multidimensional social and economic interactions, information and communication become active principles of socio-spatial transformations everywhere, becoming strategic technological sectors for economic policy and commercial exploitation. In the field of discussions on urban-regional development, in light of the normative precept of integration applied to the organization, planning, and execution of public functions of common interest (BRASIL, 2015), through inter-federal relations and various institutional arrangements, the issue of information and communication and the social use of innovations that promote them, become technical-political issues of first magnitude for the functional field of urban and regional planning. Understood from the perspective of a socially constructed and agreed-upon process, regional planning and the most appropriate territorial configurations for another construction of political power and cooperative arrangements involve not only the recovery of classical concepts (MOSCOVICI, 2011; ALBUQUERQUE, 2013) and the propagation of critical ideas in the field of social innovations, and democratic innovations (POGREBINSCHI 2017), but also new theoretical-conceptual appropriations regarding development and regional and local planning (BOISIER, 1996; SILVA NETO, 2003).

In this context, it is worth asking about other possible meanings for the relationships among information, communication and territory. In particular, this article questions which geospatial information platforms and sharing interfaces are currently available to public access, aiming to understand the urban and regional reality of the state of São Paulo and which productive circuits of information, knowledge and interactivity can be constituted and aggregated to safeguard the common interest in the context of urban-regional development planning.

The idea under discussion from this short essay unveils discursive horizons about information and communication at the heart of the active instance of construction of new political actions and associative forms that can be engendered in the analytical-prepositive field of production which is socially useful knowledge for the organization and planning of regional development. In the evaluative context of the contemporary experience of society living in real time, the objective is to recognize the essential meaning of information and communication as dynamic processes of construction-reconstruction of society itself and its territory of life to reflect on socio-political innovations in the field of urban-regional development planning.

This article is proposed to be developed in three sections through bibliographic and documental contributions and an inventory of some empirical and factual bases, in the scale of the state of São Paulo and anchored in the metropolitan region of Vale do Paraíba and North Coast. The first section refers to the global context of society in real-time in its relations with information and communication. In the second one, the scope of the discussion will be based on the planning and regional development, considering the institutionalization of metropolitan regions and another theoretical perspective for regionalization. And in the third section, the issue of information and

communication will be addressed from the premise of the public service of common interest, and also through the recognition of sharing platforms and interfaces currently available in the state of São Paulo for public access to geospatial information, including the creation of observatories and WebSigs.

Information, communication and the issue of innovation

We live in a time when the advancement of scientific and technological knowledge in information and communication has become remarkable and of extreme social and economic value for the future. In this context, the differentiation of the geographic space has been verified and analyzed by the scientific-technological, informational and communicational density that the various regions and cities of a country have incorporated into their territories, due to a widespread diffusion of innovations in the most varied fields of economic and social activity since the post-second world war since 1980s. The study of information and communication becomes central to better understand and discuss the new conditions of a world of social relations and globalized economic flows and, therefore, of an increasingly interactive and participatory society, thanks to the technical-social complexity from collective life the technological means of communication and information available today, and the multiplication of social debate spheres.

Although selective (to a large extent), the experience of society in "real time" is a major event of the social organization of our days. According to Rosnay (1975, p. 200), "real time" is understood as "the maximum time tolerated for information which assures a decision can reach a recipient before he makes that decision." This maximum time varies according to the situation, explains the same author. In everyday experience, real time is intrinsic to face-to-face interaction with other people or machines, but also to long-distance communications through technologically diverse means of transmission.

Consequently, we live in a time of acceleration and interactions and reciprocal influences among actions and economic and social activities developed not only in terms of contiguity, but also virtually.

Therefore, information and communication become areas of activity and socio-political action of essential meaning to reflect, analyze and transform society and its place of life. In the context of the production of knowledge and socio-spatial analyses, information and communication are subsidies of common interest and usefulness to the elaboration of development policies and urban and regional planning, as well as to the processes of education and social awareness (ROSNEY, 1975).

However, a major challenge still stands in this process: that of social use extended to society as a whole. Most of the Brazilian population do not have access, training and/or conditions for a conscious, oriented and critical use of these technological resources and the big amount of information that can be organized, generated or conveyed through them. Therefore, the issue of digital socialization is not dissociated either from the possibility of a conscious appropriation of technology, enabling decisions regarding its use or from misinformation, a major social problem during the pandemic.

We are taking the first steps towards a socialization of information, a society of information, communication and knowledge in its fullest sense, that is, not only in the sense of universalized access, but also in the perspective of an awareness of the world and/or the place where people live, increasingly favorable to the production and appropriation of local knowledge about the place of life, social interaction that leads to expanded levels of social organization and political participation, in short, to the exercise their rights of citizenship.

Santos (1987, 127) draws attention to the fact that "modern man is, perhaps, more helpless than his ancestors, due to the fact that he lives in an information society which denies him the right to information". That is, leading large segments of society to "live in ignorance of what goes on around us, when a good part of the decisions that concern us are made due to this information we lack of", which does not contribute "to the formation of an integral citizenship" and the democratization of social life.

As Julião (2003, p. 222-223) states, a measure of the degree of development of societies would be in their capacity to produce, integrate and streamline circuits of production of information and knowledge about society and the space where they live, which it can contribute to raise the level of citizens' sensitivity and involvement in collective affairs.

The clarification and discovery of individuals about their condition as citizens and subjects with the capacity for historical transformation can take place with the understanding of the social context, the world, the country, the city, and the place of life. The socialization of information increases knowledge of the world, which increases the possibility of interacting with it, transforming it and thus reconstructing history.

The socially necessary innovation

Inseparably linked to the discussion of the social value attributed to the issue of information and communication, the issue of innovation and its relations with society and regional development calls, in fact, to the debate and the challenge of contributing to the dissolution of ideological markets that support them. In this sense, we should mention the issue of innovations in the current context of neoliberalization of economics and politics to oppose it with another theoretical perspective, which may be better suited to the concept of closely linked social and political innovation to what is politically and socially necessary and desirable, and to what would constitute a socially constructed planning.

In Garcia's critical view (2019, p. 21), it is necessary to understand that it is society that gives meaning and purpose to the economy and not the market economy to society. The issue is not that of technological solutionism, it is necessary to "evaluate the profile of innovation to make decisions about which one you want to innovate and how you want to innovate it" in order to achieve socially equitable ends.

If in Brazil we have a social structure at different levels of government entirely aimed at promoting Scientific and Technological and Innovation Policies (WAZDAT, 2020), theoretical and critical interpretations of the issue of innovation must be retrieved and re-elaborated for the purpose of operationalizing the analysis of current realities. As Moscovici (2011) said, it is the power of new ideas that creates an atmosphere prone to substantial changes and the formation of social bonds that recreate reality. In this sense, in the permanent clash between tradition and innovation, the true innovations are not those that originate from outside sources, but those that are engendered from the real needs and original creative energies of different societies, which refers to the broad conception of Celso Furtado (ALBUQUERQUE, 2013) regarding innovation based on human creativity and as a de-alienating sense that restores the primacy of wisdom over knowledge and knowledge as an end in itself, therefore, going beyond the idea of technological innovations and scientific knowledge subordinated to the market. In a contradictory context of ideological and interpretive contributions, technological innovations will be considered together with possible socio-political innovations (POGREBINSCHI, 2017) for regional planning and integrated development.

Information and communication for regional planning and development

The issue of innovations in the universe of information and communication is a key point to be portrayed in the field of relations between public policies and planning for regional development. In the current framework of normative precepts for regional-metropolitan planning, that is, metropolitan regions established by the federated states, urban and regional planning is defined as a broad functional field for the particular prioritization of public functions of common interest, in accordance with the deliberation development councils of metropolitan regions.

The hypothesis is that information, knowledge and communication can be considered public functions of common interest within the scope of cooperation and production circles serving the strategic definition of designs and designs for regional development and its socially necessary and constructed planning.

With the 1988 FC, regionalization takes on predefined contours by the federated states, by levels of socio-territorial complexity, in metropolitan regions, urban agglomerations and micro-regions, and then, what happens in these decades from 1990 onwards. On the one hand, it is the strengthening of urban planning, due to the constitutional legitimacy given to the municipality as a federative entity, and on the other, an unbridled process of creation of metropolitan regions for political and financial reasons of favoring hegemonic actors, leading to the Statute of Metropolis (BRASIL, 2015).

In this process, theories of local development and regionalization take on other formulations and the normative precepts of regional-metropolitan planning become guidelines for the elaboration

of new hypotheses and analyses. The new regionalization tend to fragment historically constituted regions (SILVA NETO, 2006), making market interests prevail in the consolidation of selective regionalization, which, as a rule, is constituted around engineering systems, such as a highway among others, converging to Tavares (2018), when considering the axes of development as a paradigm of regional planning.

Regarding the transformation in knowledge about regionality and regionalization, the emphasis on connections and synergies for regional development tends to be privileged. Boisier (1996) offers us a promising perspective, which does not contradict the proposition of a socially constructed planning, by pointing out, in contexts of decentralization/redistribution of power, the tendency of regions to create political power through the organization of civil society, agreements and agreed commitments, culture of cooperation and capacity for collective creation of development projects, without losing equity and participation.

With this perspective, the design of strategic scenarios for regional development could be based on new territorial configurations that are more suitable for different types of cooperative actions, suggesting the identification and/or strengthening of pivotal and associative regions, considering the geographic contiguity and the associative amplitude from the smallest organized territories, and also, what they call virtual regions, matching the inter and multidimensionality of actions.

Furthermore, Boisier (1996) situates the issue of information by listing the characteristics of a modern state and the new functions of “regional quasi-states”. For the author, it is not a technocratic modernization of the State with computerization because with this information (which is stored, mobilized and integrated), that is, integrated systems of information and analysis produced and shared, territoriality is incorporated into the political and social project, streamlining actions and planning processes, cooperative management and participation.

In this scope of discussions on the relationship between innovations and regional development, an approach to the issue of technological innovations in the field of production and circulation of geospatial information and the social issue involved therein is observed and considered here.

Geospatial information in a virtual environment

Within the scope of post-World War II scientific-technological processes and their acceleration in the field of information and communication technologies, geospatial information undoubtedly stands out not only for socio-geographic studies, but also in the daily life of large demographic populations. Modern cartographic, georeferencing and geoprocessing technologies, as well as information organization, storage, and dissemination in network systems and cell technology are at the heart of this diffusion process which, in Brazil, tends to intensify, especially from the decades of 1990 and 2000.

Information assumed as something immaterial, something fluid, is conditioned by society (its structures) and conditions it. It is remarkable the importance of the exponential increase in the circulation of information in the social world and of studies concerned with understanding the historical period and current society, through the phenomenon of technological innovations and their socio-spatial implications.

With the new technical objects incorporated into the territory and in different areas of activity, informational fluidity tends to increase and complexify the relational dynamics of social life in all its instances. According to Santos (2005, p.38) in the technical-scientific-informational period, the geographical environment is “marked by the presence of science and technique in the processes of remodeling the territory essential to hegemonic productions”. and “information, in all its forms, is the fundamental engine of the social process and the territory is also equipped to facilitate its circulation.”

In this context, technological evolution and the development of new forms of sharing information also result in a growing increase in the number of websites or portals, called WebSig or WebGis. Among some purposes of these virtual network access, interfaces are the sharing of an integrated database of spatial information and the elaboration of cartographies remotely. For Veenendaal (2015), web maps and GIS technology and applications have been developing “in response to the growing demands of users and applications” and technologies “including digital globes, positioning-enabled mobile devices and cloud-based geoweb services have been fundamental to promote this growth”.

These new virtual remote platforms share statistical and spatial information, and this information dissemination takes place in various institutional segments, such as departments of federal, state and municipal secretariats and other organizations.

Although it is recognized that the sharing of cartographic data and in a GIS environment dates back to the 1990s, when new programs were introduced allowing greater amplitude for the display of cartographies and access to the GIS environment on the network, one can see that there was a significant growth in portals and geoportals during the 2010 decade, when there was greater integration between users and different databases in sharing and accessing geospatial information.

Next, an initial survey of portals and geoportals will be presented, which share statistical and spatial information, enabling socio-spatial readings and analyzes and remotely controlled cartographic elaboration.

Platforms and interfaces for sharing geospatial information in the state of São Paulo

Regarding the extensive dissemination of information through databases on pages dedicated to sharing information, portals and geoportals, there is an expressive availability of these platforms and interfaces, as well as an integration of databases for access through the world wide web in the state of São Paulo.

Such integration began in 2015, through decree 61,486 of the same year, which instituted the National Spatial Data Infrastructure Program for the State of São Paulo (INDE-SP). The objective was to promote the organization, systematization, standardization and dissemination of geospatial information, in accordance with the standards and norms established by INDE (SÃO PAULO, 2015). As a result of this standardization, INDE-SP relocated a lot of information, which is accessed through a WebSig responsible for granting geospatial information from state institutions and secretariats. Table 1 summarizes the various institutions, companies and state secretariats integrated into a single spatial database.

Table 1: INDE-SP: database integration of state instances

Institutions, companies and state secretariats	
Metropolitan Agency of Baixada Santista	ITESP Foundation
Energy Company of São Paulo – CESP	Institute for Technological Research IPT
Cetesb	Geological and Cartographic Institute - IGC
COBRAPE	Geological Institute
Ribeira de Iguape Basin Committee	Department of Culture - Condephaat
Emplasa S.A.	Secretariat of Social Development
EMTU/SP	Environment Department

Source: IDE-SP, 2020.

Although it appears directly integrated into the WebSIG INDE-SP information catalog highlighted above, the State Data Analysis System Foundation (SEADE) has an interface for accessing data and information at various scales in the territory of São Paulo. The possibility of obtaining statistical information makes this portal an ideal place to search for and provide socioeconomic information. However, with the advent of the internet and the possibility of making spatial information available, in 2019 a digital platform called GeoSeade was launched, with interactive features and the possibility of viewing maps and territorial analyzes in the state of São Paulo. According to Seade (2020), “the GeoSeade interactive map allows several layers of information to be grouped and viewed simultaneously. It is possible to edit the appearance of the map, create graphics and cluster and heat maps, among other features”.

Although integrated with INDE-SP, Emplasa, a planning company that existed since the 1970s, and was recently extinguished by the state government, has a geoportal, the Metropolitan Information System (MIS), which is organized by spatial layers that enable the spatialization of socioeconomic information of the São Paulo Macrometropolis. According to EMPLASA (2018), the geoportal “has proved to be a great ally of the integrated planning of public management actions, providing information at the federal, state and municipal levels in a single environment”, making it

possible "the simultaneous viewing and editing of official georeferenced databases, allowing the assessment of spatial correlations between them".

At the municipal scale, one can also highlight a geoportal of data concession used by the Municipality of São Paulo (PMSP), entitled GeoSampa. This platform offers the sharing of different spatial databases for the city scale, divided into themes such as Health, Housing, Social Assistance, Education, Transport, Culture, Green, Urban Security, Farm, Sport and Urbanism. The Geographic Information System of the Municipality of São Paulo SIG-SP is the instrument used for "the production, maintenance, analysis, dissemination and dissemination of mapped information" and aims to "support the licensing, planning, implementation and management of public policies, as well as how to prioritize citizen service" (PMSP, 2017).

Observatories and the WebSig of the Regional Observatory of the Vale do Paraíba and North Coast

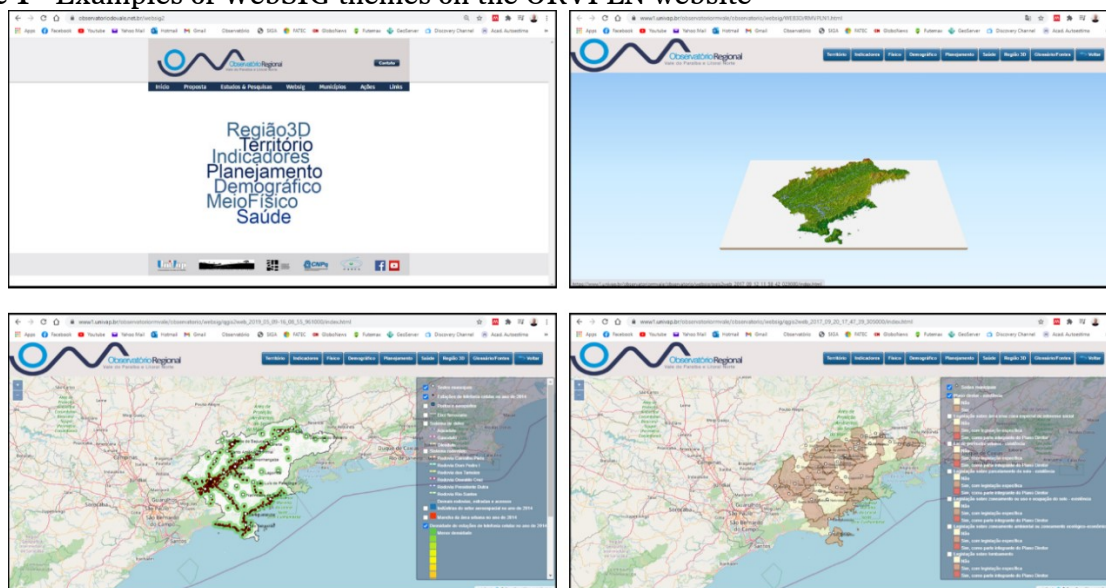
Observing the trend of disseminating information for planning and managing the territory on multiple scales, as well as the use of the world wide web, the creation of observatories has become another form of dissemination and access to information of different species. In this field, the electronic addresses of various national and state-level observatories were researched (Table 2), which made it possible to acquire knowledge of the characteristics and forms of dissemination of documents and information and to verify the little emphasis on the use of WebSig.

Table 2: Synthesis table of the main urban-regional observatories active online

Observatories	Website
Observatório das Metrópoles	http://observatoriodasmetropoles.net.br/wp/
Observatório de Saúde Rio de Janeiro	http://observatoriodasauderj.com.br/
Observatório do Recife (ODR)	http://www.observatoriodorecife.org.br/
Observatório Metropolitano de Indicadores da RMCampinas	http://www.agemcamp.sp.gov.br/observatorio/index.php
Observatório dos conflitos por águas da RM de Curitiba	https://observatorioconflitosaguarmcuritiba.wordpress.com/
Observatório Regional do Vale do Paraíba e Litoral Norte	https://www.observatoriodovale.net.br/

With this gap, the Regional Observatory of the Paraíba Valley and North Coast (ORVPLN), located in the Center for Urban and Regional Space Studies, of the Postgraduate Program in Urban and Regional Planning at the University of Vale do Paraíba (UNIVAP), stands out for the experimental development, and, of a WebSig unprecedented for the region, aiming to provide public and interactive access to information about the reality of that same region. In fact, the use of interactive maps in WebSig represents an innovation in the field of production, integration and propagation of geospatial information for multiple scales of analysis.

The initial idea of this WebSig was to share information and mapped data about the RMVPLN, produced by recognized research institutions and in UNIVAP PLUR of UNIVAP theses and dissertations. The information contained in WebSig brings basic spatial data that can be visualized in various thematic fields: 3D Region, Territory, Indicators, Physical Environment, Demographic, Planning and Health. Figure 1 presents some examples of WebSiG layers already developed for the respective thematic fields.

Figure 1 - Examples of WebSIG themes on the ORVPLN website

Source: ORVPLN, 2020.

In view of the possible consequences of the institutionalization of the RMVPLN, the use of this tool and the development of this WebSig and others can be the object of new forms of institutional cooperation and participation of different social agents, supporting the continued production of studies, analysis and knowledge of issues integrated urban-regional planning, as well as integrated regional planning, a public function of fundamental common interest.

Final considerations

The social and political implications of the information and communication age in which we live are still a universe to be explored, considered and analyzed. The resulting innovations that will be the object of creation and propagation are endless and, certainly, to a large extent, unusual. All of them prepare the conditions for adjustment to the successive needs of what is socially necessary.

Dissociated from its structures of forced modernization, at the exclusive service of market interests and alien to the real demands for more egalitarian development of socio-spatial conditions, innovations in the field of information and communication may in fact rescue the creative dimension of groups and individuals, enhancing political actions and the synergistic irradiation in favor of projects and actions built in new circles of cooperation and production.

Applied to the production of knowledge about regional or local realities, or to propositions of institutional arrangements or of different social agents, around common objectives, the reasoning linked in the article, hypothetically, can lead to reflections on the planning of a socially constructed development. From technological to sociopolitical innovations, there is a possible path to social debate.

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