

Handbook of Research on Entrepreneurship and Marketing for Global Reach in the Digital Economy

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Chapter 12

Innovative Role of Users Within Digital Economy: The Case of Information/Knowledge Flows at Social and Semantic Networks (Web 2.0/3.0)

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ABSTRACT

Contemporary economic and financial crisis is closely associated with social innovation. This process profoundly influences cyberspace's phenomena within our globalized communications paradigm. The correspondent debate on the articulation of crisis and innovation was reconceptualized by Marx, Nietzsche, Sombart, Schumpeter, David Harvey, etc. However, Manuel Castells elaborated an economic but also communicational explanation, which seems to us closer to the current crisis. Castells uses the notion of "space of flows" created and shared by globalized capitalism, across information and communication networks at cyberspace. The aim of this chapter is to reflect on "information and knowledge flows" in the present crisis conjuncture. For example, within Facebook content privacy is being debated and even engenders reluctance on user fidelity. In fact, social networks shouldn't deliver just information flows but also knowledge flows, which may become central means of production/consumption.

INTRODUCTION

Within contemporaneity, knowledge flows sometimes complement or complete information flows. Other times though, knowledge competes with information, replacing or even destroying it, to produce something else, in what concerns content useful for economic, social and cultural activities.

In order to clarify such issues, this text will structure content through several questions and hypotheses, and by identifying subsisting limitations as well as clues for future debates and studies.

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A BACKGROUND: CREATIVE DESTRUCTION AND INNOVATION

The present economic/financial global crisis is deeply articulated with *social innovation*.

One mode of addressing this problematic is to deconstruct and reconstruct this concept 'social innovation'. First of all, it should be differentiated from the insufficient notion 'innovation', even if this last term already means an application of creativity to society. However, 'social innovation' is a richer term, as it allows: (a) to precise the multiple instances of newness within civil society, and even within the State; (b) to distinguish between: on one hand, *innovation social means* (i.e. ways of doing original and useful things) such as cultural creativity and open source methods; and, on the other hand, *innovation social aims*, as the enhancement of citizenship and cultural literacy.

Various connotations or pioneer ideas around the connection between economic crises and social innovation can be found in authors as the following ones: Benjamin Franklin on changes in communities (1996); Robert Owen (1995) and utopian socialism; Karl Marx (1988) about economic crises and socio-political transformations; Joseph Schumpeter (2009) reflecting on creative destruction, a concept derived from Marx and Sombart contributions); and, more recently, in Akhter Khan (2005) referring bottom up community development), Muhamad Yunus (suggesting microcredit for innovators). Other important research on social innovation was developed within the fields of territorial/regional development (Frank Moulaert, 2010), solidarity and social economy (Jean-Louis Laville, 2010), and some other essays about governance relations, cooperation, and cultural difference. The idea of creative destruction was recently applied as well to the restructuring of the city (Page, 2001), globalized culture (Cowen, 2004), modernist theatre (Ackerman, 2007), American literature (Fisher, 2000), and music industry (Dodge, 2006).

However, Manuel Castells elaborated an explanation that seems closer to the actual crisis, which is economic but also communicative. Castells (2009) introduces the notion of a 'network society', founded on a 'space of flows' created by globalised capitalism across information and communication networks at cyberspace, namely at webs where corporations, universities and other institutions/organizations implement: production, marketing and consumer driven strategies that need a constant innovation, and the respective communication and diffusion. Other studies reflect on the contemporary mass media communication paradigm and cyberspace processes (Katz, 2002).

Considering such theoretical context, this paper reflects on the *information / knowledge flow crisis* that it is observable specially within digital social networks, like *Facebook, Twitter, etc.*, where e.g. the question of content privacy is presently being debated, and even engenders reluctance to fidelity in which regards the very paradigm of digital social webs. To understand this phenomenon, we may note that, during the last decades, information became a central means of production, and recently the same has become true for knowledge. In this context, *social innovation within global communicative networks involves not just informational flows, but more and more knowledge flows*. These two economic and social assets may complement and complete each other, or compete between them. The result is often the enhancing or the devaluating and even the destruction of raw information flows, and their replacing by knowledge flows richer in meaning. Such creative destruction phenomenon is not yet very clear within digital social networks (the *Social Web* or Web 2.0), but it is more visible inside Web 3.0 (the so-called *Social Semantic Web*). The main difference between these 2 paradigms of cyberspace flows is that Web 3.0 sites (Wikipedia, Freebase, etc.) often transform raw information into commented or debated knowledge, via a more profound commitment than it happens within Facebook and other similar social networks, in what regards the elucidation of the implicit meaning circulating within shared messages. In particular, social innovation may be based on artistic creation and on scientific invention, and combine both these knowledge strategies into a specific practical tactic or activity within the social fabric.

MAIN FOCUS: COMMUNICATION OF COMMON SOCIAL INNOVATION

Therefore, it seems crucial to understand social innovation, inside the age of network society or even beyond, and within the context of the present crisis. For this aim, the social scientist must investigate, in detail, one of the neglected ideas and themes in *Sociology of Social Innovation*: the idea of ‘lay social innovation’ that may be consolidated in the concept *common citizen’s social innovation*. This term may be defined, synthetically, as a strategy for creating new solutions to emerging and sometimes original everyday problems, faced by ordinary citizens. And common citizen accountability, often related to the precedent idea, means the processes of everyday critique and evaluative ethical accounts, in what concerns the accountability of both institutional and common people’s actions and discourses within the public sphere. Such debate can prove to be very pertinent in what concerns *users’ role inside the digital economy*.

One seminal meaning of communication is ‘put in common’. If we deconstruct this notion through the idea of ‘social innovation’, we may note that social innovation should be interpreted as ‘common’ at least in 3 senses:

1. *A ‘common’ scientific ground is needed in order to articulate diverse related researches.* Note that innovation is often analyzed, within economical and organizational sociology, in a way that privileges economic and organizational forms, processes, routines and their technological products. However, social innovation needs to be more profoundly related to ecological, political and cultural realms, to name just a few. This is namely the case of the analysis on creative industries and commerce, cities, institutional and organizational policies, cultural politics, discourses and counter-discourses.
2. *‘Common’ implies communication of ideas, connected within a socio-semantic conceptual field.* This occurs when we connect the idea of ‘innovation’ with its quasi-synonyms ‘creativity’ (Becker 2006; 2008) and ‘invention’ (Gilfillan1934). Social innovation means, more precisely, the practical appliance of new and useful creative/inventive ideas, works, objects and events, to economic, social, political and cultural realms.
3. Last but not the least, *‘common’ people, and not just experts, can develop methods for innovating*: nowadays new challenges are being answered through original strategies made by multiple social players and stakeholders, e.g. ‘everyday innovators’ (Haddon 2005). Such social agents may democratize social innovation, when they apply ordinary methods (such as the ways of producing useful answers for everyday problems), through digital instruments such as mobile media and mobile networks.

SOLUTIONS AND RECOMMENDATIONS: SOCIAL INNOVATION AS A STRATEGY OPERATED BY CITIZENS WITHIN SOCIAL AND DIGITAL NETWORKS

To better circumscribe the communication process of such common social innovation, it is necessary to contextualize it. Within the contemporary globalized networked society, transformative mobilities and flows are central, especially the communicative flows underlying common citizen exchange of information and knowledge at urban spaces and scapes, and common social innovation in the economic, cultural, and artistic realms. This reflection will be done through a problematics that includes the following questions.

Question 1: Urban Mobile Flows?

First of all, how to articulate social innovation with the socio-economic realm and with cultural-artistic innovative proposals suggested by common citizens, in what regards their *urban context*? Within *creative cities*, such phenomena are partly activated by creative industries and commerce (Florida 2009). Authors like Stefan Kratke (2011), criticizing Richard Florida within a Marxist perspective, refer rather to ‘creative capital of cities’, ‘interactive creation of knowledge’ and ‘economies of innovation urbanization’.

Cultural industries are paramount for the development of cities. In this perspective, how occurs, in some detail, such innovation targeted to citizens and communities, sometimes metamorphosed by them through *common cultural and artistic innovation*? Nowadays, cultural institutions are investing not just in cultural and artistic creativity, but also in ‘common creativity’. This is often justified in order to improve citizen participation, but other times it results in a deep control over the activities of citizens, and introduces new forms of *Panopticon*. In fact, some main targets of cultural and urban events and policies are citizens and communities often censed to be innovative and participative. However, participation and innovation varies according to social and cultural profiles of audiences, as in the case of global museums publics (Guggenheim, etc.), Art Biennials and European Capitals of Culture. In effect, culture and art are consumed by social classes in distinctive modes (Bourdieu 1987, DiMaggio 1978), within art worlds networks controlled by gatekeepers (Becker 2008), and through multimodality and remediation processes (Bolter 2000). The ‘newness’ produced by artists may be complemented, devaluated or even put into brackets and replaced, in a sort of *creative destruction art process*, sometimes to allow a more intense reproduction of artistic capital. Other times, the creativity suggested by some art publics may introduce some original solutions to cultural issues.

Let me show you how this may happen in a more micro social level. On the one hand, some communities of citizens, academics, cultural tourists, or even ‘intercultural migrants’, assimilate and reproduce the information, knowledge and ‘newness’ transmitted by official or specialized sources. However, such agents and communities also appear to be producing different and sometimes innovative content and forms, in the process of a *citizen counter-hegemonic process* that includes interpretation, critique, accountability, reappropriation and sharing of information and knowledge, in co-presence within their everyday ‘physical’ spaces / times, and/or inside digital social networks.

Indeed, at cities, the production, mediation and reception of innovative cultures and arts are in close relationship with local and global urban communities, which may be organized in co-presence social networks (Simmel 1964) or in digital social networks. These societal actors often emerge as *mobile and networked communities*, in a process when (and where) they deconstruct and reconstruct various daily mobilities and flows at social networks (Urry 2006). For example, urban social actors circulate inside everyday routines in different cityscapes (family, work, leisure, etc.), within touristic tours, or in other spaces as academia and research territories. Inside that processes, recently they are using, more and more, mobile electronic devices.

In particular, strategies for regeneration of the city focus more and more on people, and emphasize citizen’s mobilization towards *cultural citizenship* (Miller 2006) and cultural politics (Moore 2008). That is, multiple common actors may act as *everyday innovators*, who restructure and regenerate the city on a daily basis, through urban and often cultural events that these citizens reshape applying common citizen accountability within creative and innovative social networks.

Such phenomena include counter-hegemonic tactics, resources and everyday discourses connected with community’s lives. Examples are oral micro-narratives and stories (everyday comments and discus-

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sions), images (murals, posters, graffiti, etc.), and texts (words in messages, sentences in political signs, etc.). Some of these are *Geo-stories*, i.e., local stories, but always in relation to global events, created and managed by and for ordinary people in the geographic space and time of their everyday life in the city.

In the era of pre-digital communications, these imagetic and textual daily fictions, among other discursive devices, were conveyed e.g. by illustrated postcards (Martins, 2017) that told visual geo-stories passed on social and urban contexts of the past, situated between pre-modernity and modernity. These and other socio-semiotic testimonies reflected the concrete and daily intervention by citizens inside social networks, in co-presence or in a remote way (via mail, etc.), within the economic, political, cultural and artistic public space in the city. Old contents were submitted to a creative destruction process that built new dialogic themes and sometimes new forms of depicting everyday issues. Nowadays, in the era of digital social networks, these seemingly trivial Geo-stories are shaped, by common people, through texts, photos, small videos and other multiple media, via laptops, mobile phones, etc. In other words, currently visual Geo-stories, articulated with digital Geo-stories, acquire an increasing relevance.

In fact, such content and sources socially embedded and embodied, verbally and visually, inside urban areas, has been revitalized through the practice and discourse of *Innovative Storytelling*, i.e. one of the most recent sets of fictional procedures deeply directed to urban cultural and artistic innovation, via creative social networks. For instance, Innovative Storytelling can be developed through instruments and styles such as Interactive Digital Storytelling and Interactive Fiction.

In short, even if the process of creative destruction for the reproduction of capitalism is being developed, and in particular regarding cultural capitalism, some counter-hegemonic cultural movements are emerging as well. Sometimes, such alternative strategies are directed to *decentralization of fiction and knowledge* by the common citizen, who gradually deconstructs and reconstructs not just ordinary fictions but as well a non-specialized lay knowledge. In so doing, he is competing increasingly, in quantity and quality of works and events, with the masterpieces and the expert knowledge produced by specialists.

In a moment where these phenomena are still little studied in its many capabilities, it is urgent to develop, among other hermeneutics, a *Sociology of Geo-stories*, including Innovative Storytelling and common fictions / knowledge.

Hypotheses

Let me try to answer to the precedent issues through some conjectures:

Hypothesis 1.1: The contemporary city is a vast arena for innovative social-cultural mobilities.

Creative geo-fictions are being developed by urban travelers such as cultural tourists, among other social actors. This can be clarified by reflecting on the concept '*tourism mobilities*', and in particular about the process of *mobile art flows* that *cultural tourists* activate during their visits at *art museums* (Andrade, 2017a, pp. 1-17). This study contextualizes, however concisely, the genealogy of the historical and social phenomenon '*mobility*'. Moreover, it traces the state of the art of sociological ideas connected with mobility and tourism, like '*leisure mobility*', '*event mobility*', '*lifestyle mobility*', '*intercultural exchange*', '*sustainable tourism mobility*', '*slow tourism*', '*mobile togetherness*', etc. In fact, the deep understanding of such *social and semantic field* can make the difference between a serious or an amateur research in this area. In sum, this theoretical discussion may help to interpret innovative *mobile art flows at the museum*, such as slow tourism, within tourism mobilities.

Hypothesis 1.2: The boundaries of the global city are being enlarged incommensurably.

When we speak in the remote possibility of living in outer space in a somewhat distant future, we forget that part of human society is already there, through satellites that enable Internet or GPS, two of the central elements of our present life on Earth, but lived through that space beyond Earth. In other words, cyberspace is the first serious attempt by man to inhabit interplanetary space (Andrade, 2018).

Therefore, it seems pertinent to analyse the possible urban life not only in the outer space of the future but also in the context of enlargement of our *habitable territory* at present. Nowadays, more and more segments of urban human life emerge in the hybridization between, on the one hand, the existence of man within his physical condition and, on the other hand, human life in its virtual condition inserted in outer space.

To perform such an analysis in scientific terms, in addition to the contribution of Aerospace Engineering and Life Sciences, it is necessary to develop Social and Human Sciences that allow us to think about our existence and social consciousness also around our seminal planet, and not just on its surface. After all, *digital cities* that now proliferate in cyberspace are only a preliminary figure of urban networks that are already being woven not only in virtual form, but increasingly materialized within this *social outer space*.

A second manifestation of interplanetary urban life, this time to be held in a longer medium-term rate, is *space tourism*. Many space travels are being marketed and reserved in advance through companies of a new branch of economic activity. What new role will have aero-spatial industries/firms in the fierce competition to get the best tranches of the tourist market in space?

A third configuration of interplanetary urban life, now planned for a long term, emerges in programs for building infrastructures to live on other planets (*terraforming*, etc.). This possibility, if it will be feasible, may produce urban networks that promise to transform irreversibly our conceptions of public and democratic space. E.g., how polis governance and mass/digital media will work in these new realities?

Question 2: Citizens Public Wisdom?

Secondly, how characterize the various segments of agents and publics that produce and consume cultural and artistic lay innovation, in terms of age, sex, education level, work situation? And how they react, in terms of participation and *cultural citizenship*, to cultural and artistic innovations in urban scapes? In other words, what agents of public communication of cultural and artistic innovation are more decisive in the urban space?

E.g., how do artists and arts and cultural gatekeepers (critics, curators, consultants, collectors, auctioneers, teachers, researchers, etc.) exercise their knowledge and power, regarding the practices and discourses of encouragement or criticism of cultural and artistic innovation, within a strategy of creative destruction and/or inside counter-hegemonic creative social networks, inherent to the urban cultural life?

Hypotheses

Hypothesis 2.1: Digital users are more and more, and simultaneously, authors, readers and actors.

In contemporary times, we are not just immersed in the information society, not only submerged in the knowledge society, and not solely entangled in the network society. Nowadays, a hybridization of these earlier social configurations is being forged, named *Research Society* (Andrade, 2011b).

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This emerging societal paradigm is defined as a process where ordinary citizens can turn into non-specialist journalists and researchers, in certain conditions. For example, within the current social scene, particularly at digital social networks (Web 2.0) and social semantic networks (Web 3.0), websites are being developed that provide explanations of specific content and research, transforming their participants and users into a kind of '*lay-journalists*' and '*lay researchers*'. Indeed, many news and researches stages are now undertaken by these ordinary and not professional users, although reaching varying degrees of quality. The main novelty is that these testimonies made from portable computers and mobile devices, sometimes anticipate the news coverage undertaken by media professionals, or the publication of scientific research results developed within the university.

Therefore, in this Research Society, a novel authoring regime seems to circulate, which is founded on and merges the following two social dimensions: the recent take-off of the Web 3.0 or Social Semantic Web, in addition to and / or in opposition to Web 2.0 or Social Web (*Facebook*, etc.); and the new *hybrid authorship* configurations that underlie Web 2.0 / 3.0:

Within such authorship perspective, and first of all, a hybridization is happening between: (a) on the one hand, the author (and the social regime of '*authorship*' that underlies the author) with (b) on the other hand, the reader of his texts (and the subjacent reader's social regime of '*readership*'). Secondly, a fusion occurs between: (a) on the one hand, the author and the reader; and (b) on the other hand, the two socio-cultural actors who represent the author and the reader and their modes of communication (ie, the regime of '*actoria*' corresponding to these two social characters, within the social arenas of the book, the writing and the reading processes).

Hypothesis 2.2: Hibridology constitutes a sound way to understand intercultural users.

Hybridization refers to a mode of knowledge and action associated with the hybrid. And this last idea denotes the interstices, the network of relationships, the places and instances that, while merging their essences and experiences, generate new productions and reproductions of themselves. Hybridity is viewed by several schools of thought and many practitioners of literature to be one of the main weapons against colonialism. This is especially true of theorists of postcolonialism such as Edward Said and Homi Bhabha.

If hybridity is central to postcolonial studies for reflecting on our intercultural society, it is also true that this school of thought is itself hybrid since their origins. In fact, in our postcolonial age, literary texts and even scientific writing (historical, sociological, etc.) increasingly display a hybrid nature.

However, new routes should and must be tried, such as *Hybridology* (Andrade, 2014), which is a posture that aims to study everything that has a hybrid nature, and in particular entities or ideas operating within the Research Society. But how can an historian, a sociologist, an anthropologist or a literary critic, detect hybrid public actions and meanings that lead to a more intense communication among intercultural or transcultural users? One of the possible answers can be the following thesis: besides the reading and writing of expert knowledges, common concepts (a central term in the sociological phenomenology of Alfred Schutz), used by common people from different cultural origins in a daily basis, may be one of the keys for mutual understanding among different cultures nowadays interconnected within our global postcolonial societies. In particular, if these common concepts translate local conceptions familiar to local inhabitants of the multiple coins within the planet, and fusion and hybridize them into *hybrid concepts*, through social and semantic networks of meaning and conflict within cyberspace.

Question 3: Geo Stories at Web 2.0 / 3.0?

And in terms of common practices and discourses, is there now a production, mediation and consumption of innovative fictional styles and content, produced and shared within digital social networks at Web 2.0, through ordinary knowledge, such as visual *Geo-stories*, Innovative Storytelling and common fictions / knowledge?

As known, Web 2.0 (or Social Web) is an Internet strategy of production, exchange and consumption of information, where the user is not just reading (consuming) information, but also writing (producing) it. For example, in a blog post or in a post's comment, or in social networks such as *Facebook*, *Twitter* or *YouTube*, users share not only 'objective' information, but also multiple personal and group stories about daily events and problems, by suggesting texts, images and videos, sometimes original and sometimes borrowed, or modified in *mashups*, etc. These hipermediatic materials, originated from different socio-cultural contexts, undergo multiple fusions within virtual public space, for example inside a *Facebook* wall, which carries and transforms the initial meaning in different and sometimes innovative directions. Indeed, such content and media cause, beyond textual comments, other images, and this process builds textual and visual fictions that constitute geo-stories set in both physical common and virtual space. Such a convergence of media and meaning has some similarities with the 'parallel editing' developed by the film director Eisenstein. In other cases, a hybrid and sometimes original assembly occurs, which is no longer based on hypermedia, but rather on *hybrimedia*. This concept means an *original* (new) fusion of media whose nature is different from the *originary* (native) media that formed it. In other words, we are witnessing a sort of 'constellation' in the words of Benjamin, but a constellation of common ideas and concepts, produced by any citizen, in constant fictional and frictional flow. Thus, the *fiction* inherent to the retelling of our everyday stories and the *friction* mobilized by the public opinion of ordinary people, never fail to dialog to each other.

According to the 'information architect' Thomas Wander Val and other authors such as Mohammad Nauman (2008), Isabella Peters (2009), and David Oggier (2010), the reconstruction and sharing of contemporary information occurs, partly, through *folksonomies*. These are systems of classifications and categorizations of content, constructed collectively through tags or annotations, especially by Web 2.0 ordinary users. As mentioned supra, the digital common user, inside this internet's second age, in addition to reading the information, is more active in that he also writes, via comments and critiques (s) he shares in social networks. In effect, this *reading / writing Internet* uses a language that deconstructs official narratives transmitted by traditional media and presents them as ordinary fiction or non-fiction. In addition, Web 2.0, in part, recreates erudite knowledge in a sort of common knowledge, through *collective intelligence* referred by Douglas Hofstadter, Peter Roussel, Pierre Levy and Douglas Engelbart, among others.

Or, again, even if sometimes this can appear as a counter-hegemonic strategy, may is it being reinvested through a creative destruction process, in order to refeed the cultural and informational capitalism system?

Hypotheses

Hypothesis 3.1: Everyday life stories constitute one background and one paradigm for locative depictions of reality and society.

Innovative Role of Users Within Digital Economy

The author of the present text suggested in 2009 a new form of literary novel, the *GeoNeoLogical Novel* (Andrade, 2011c). This is assumedly a different genre of novel, in an era when the network of almost all networks, and in particular digital social networks, blogs and other political-discursive, scientific-technological, literary and artistic dispositifs emerged, within Web 2.0 and Web 3.0, and radically changed our system of production and fruiton of meanings and knowledge.

This novel name, 'GeoNeoLogic novel', witnesses the three main dimensions that underlie it: space (denoted by the prefix Geo); time, specially the diachrony of innovation (Neo); and the communicative relationship maintained among the social subjects involved, such as the author, the reader and the social actors that they both are. This relation is presented by the term *logos*, a Greek word which means 'language', 'discourse', 'reason', etc.).

In addition, *transmediatic literature* is understood as literature that is not fixed in one medium, but in several, not being exclusively characteristic of any of them. Instead, transmediatic literature acquires a hybrid and nomadic nature, founded and melting in the social fabric that produces and reproduces it. Such a hybrid and intercultural novel can't be perceived without its communicative, participatory, relational and reticular pedestals. Hence this style of novel allows various ways of reading by the reader (who also can transform himself into a co-author), within the following *modes of writing / reading*: fiction and meta-information mode; interactive mode; social and sociological mode; and critical-informative mode. The (first) author himself can insert a new form of critique of literature, a *self-criticism* included inside the book he offers.

An example of this *literary transmeditation genre* is GeoNeoLogic novel. In fact, in addition to this novel presented in a book or *book novel*, GeoNeoLogic novel may take the form of an *ebook novel*, a *movie novel*, a *Web 3.0 novel* or a *mobile novel*.

As to the content and plot, such an experimental novel revolves around a traumatic event: the *death of the author* by a common citizen, at a normal street with a banal gun. Through dialogue, the novel characters try to figure out who will take the place of the disappeared author: if only the reader, as Roland Barthes would point out, or also any ordinary person (who is a social or cultural actor or agent), who have emerged as potential candidates for *hybrid characters* integrated in the narrative.

Regarding the interface, the fictional text presents, at each scene, three 'vertical' *writing / reading itineraries*, that can be articulated with one another 'horizontally'. Each one of these *mediatic plot courses* uses a specific medium and the respective language, that refers, in a greater or lesser extent, to the dimensions 'space', 'time' and 'logos':

A first text, that has a linguistic nature, uses a national or 'mother' language as Portuguese or English. This text was deconstructed into several sub-texts of different types, either narrative (the mention of major events), dialogic (the characters dialogues) and meta-informative (keywords, tags, etc.). Moreover, some characters invented a *hybrid language*, through sentences spoken with some words in Portuguese ad others in English, which results in *portuglish*.

A second 'text' uses the visual language inherent to characters photographies (people, animals, inanimate objects, etc..) and scenery (space or synchronic level) subjacent to the novel's scenes (time or diachronic level).

A third 'text' refers to the language of maps, which represent the course (time) of the paths (space) used by novel's characters in their daily lives within the real world, which, in this way, overlaps the fictional world. The first author or seminal author associated photographies both to (a) the moment these images were taken and (b) the urban street or area where these photos were captured. This was done through a

geotagging software, which allows the combination of significant keywords (or tags) to a given place of the city and to a certain social temporality.

The novel also includes a Geographic, Diachronic, Onomastic and Thematic index.

Hypothesis 3.2: New locative literary and sociological genres, such as Sociological Comics, hybridize old genres.

Social processes often require a sociological, anthropological and historical reflection founded on alternative theories, problematics and methodologies. This is the case of '*Sociological Comics*', both a new literary genre and a social sciences technique, that transform social stories into sociological stories, through sociological research presented in the form of comics (Andrade, 2015).

Sociological Comics uses three main types of means and methods of communication, in order to explain contemporary social processes: communication mode in co-presence (commercial or political adds in public urban space, murals, graffiti, stencils, stickers, etc.); classic mass media communication mode such as newspapers and television; digital communication mode, for example those occurring in social networks Facebook, Twitter, YouTube, Instagram or Pinterest.

Sociological Comics has been publicly disseminated through several works or events:

A book including a sociological story presented in a comics form, reflecting and testifying the recent European economic policies and some counter-hegemonic political actions developed in 2013 in Portugal against these policies (Andrade, 2015). A sociological (hi)story is founded on social (hi)stories that occurred around specific and concrete social issues and problems. In addition, it includes a sociological research through partially alternative sociological techniques such as: the demonstration of hypotheses from their validation / information on the street's empirical field by the social (and sociological) process 'political demonstration'; the use of social language games, including critique or humour, produced by the ordinary citizen and collected by the sociologist; the use of hybrimedia (i.e., hybridized media) within digital social networks. Therefore, this alternative book interpellates the nature of both (a) the process of social and sociological reading / writing (b) and the medium 'book' itself.

An artist book entitled *Gamebook Sociological Comics*. The work was selected for an exhibition in London, at Gallery i 'KLECTIK ART LAB,' Old Paradise Yard '20 Carlisle Lane (Royal Street Corner) in late May 2015. Such Gamebook allows a new style of reading both concerning the medium 'book' and the medium 'game'. Furthermore, the gamebook resumes the objectives of the above mentioned GeoNeoLogic Novel, an experimental novel built in hybrimedia, allowing sociological interpretations through a *literary history* located by GPS in real time. This novel has also been displayed in London, Stockwell Studios Gallery in December 2012, after its first launch at the University of São Paulo in 2009.

Through these and other alternative sociological methods, it is possible to reconstruct and disseminate practices, interpretations and explanations of multiple events that occurred and were thought in the urban and digital public spheres. These methods may be applied in a hybrid form, ie, at the intersection between science, new media and the arts. In the case of Social and Human Sciences, in addition to individual life stories, it is necessary to account, deconstruct and reconstruct, *social and sociological stories* through various (textual, visual, auditive, tactile, etc.) strategies. One of the purposes is to require accountability to those social agents responsible for today's new configurations of alienation in what regards citizenship. This will be achievable in part through the communication, by citizens in conjunction with social scientists, of collective and alternative ethical / aesthetic meanings that are being debated within the arena of contemporaneity.

Question 4: Knowledge Flows and Counter-Hegemonic Flows at Web 3.0?

Another relevant question for interpreting social innovation and creative destruction within the information/knowledge scene, is this one: how does communication occurs in what concerns the production and reception of content and of cultural genres, inherent to the common reading/writing developed within Web 3.0, especially in the case of innovative content and of genres?

As previously noted, Web 3.0 (or Semantic Web) signifies a new cyberspace and network paradigm beyond Web 2.0, visible in sites where data is not just shown and permuted (as in Web 2.0), but is as well semantically explained. This clarification of information's meaning provokes a more profound transformation of information itself into knowledge. Major companies are shifting to this innovative *knowledge flows' cyberspace*, as Google and Facebook, two central firms that contributed soundly to Web 2.0 public image, in XXI century's first decade. Google is now introducing a new search engine which uses semantic heuristics that characterize Web 3.0. And Facebook, wanting to compete with Google in this lucrative search engines business, is proposing a 'graph search' engine that transforms Facebook internal raw information inscribed by users, into knowledge about the relationships among diverse users' characteristics or about their content's properties. For instance, users can ask where and when their friends are travelling, and have such quest translated into a visual semantic report.

Hypotheses

Hypothesis 4.1: Knowledge flows can be interpreted sociologically, and partly, as a process of creative destruction, as noted supra, in the sense that information flows associated with digital social networks and the correspondent consumption of information are being dialectically annihilated in part, and often transformed into knowledge flows.

In fact, information flow crisis is manifested through contradictions between the *competing economic value* of raw information on users and content, and/or the more sophisticated economic value of knowledge about users demographic characteristics articulated with users' content properties.

Hypothesis 4.2: Moreover, a political consequence of this economic creative destruction process is the replacement of Web 2.0 order by Web 3.0 mode of exercising power, which has provoked a counter-hegemonic process of political creative destruction.

The Semantic Web's new (and innovative) power paradigm is not based any more just on the vigilance of information, as it happens in Web 2.0, but also on the *control of knowledge* concerning user's content flow. Through this strategy, institutions and organizations operating within Semantic Web may implement a sort of *Web 3.0 Panopticon*. Through this dispositive, they may envision, more efficiently, users themselves, namely through knowledge and not just through information about their private life's. Therefore, even if the social and participative dimension of Web 2.0 and Web 3.0 cultures is a relevant step for democracy and citizenship, several economic, political and cultural risks subsist, that are necessary to uncover.

To resist such panoptic power, users can use Web 3.0 in counter-hegemonic ways, e.g. using these social semantic networks as a pretext for renovation and *re-innovation of knowledge*. We mentioned earlier that Web 3.0, in addition to allow writing by the user, as it is happening in Web 2.0, explain, more deeply,

the semantic meaning and the very logical structure of information and knowledge that they convey. This is done through socio-semantic sites and *socio-semantic networks*, which are places of cyberspace / cybertime where ontologies, and other social and semantic devices, can be activated by users.

Sociological reflection on cyberspace can't ignore the temporalities that are associated with it, and in particular within digital social networks. Such rhythms and discontinuities were named 'cybertime' in the 90' decade of last century (Andrade, 1996). *Cybertime* may be defined as a collection of temporal processes and events that occur or are activated by users when they circulate within cyberspace. These social rhythms may be (a) *asynchronous*, such as the gap between the writing of a text in a web page and its reading; and (b) *synchronous*, when a digital writer/speaker and a digital reader/listener are communicating at the same time, e.g. in a chat or using Skype.

Ontologies are sets of inter-related concepts in a given area of knowledge. Even if they are mainly constructed by information experts, ontologies are being reconstructed as well through *folksonomies* produced by ordinary people (Gamper, 2010). Within and beyond this articulation between folksonomies and ontologies, *Social Ontologies* are now systematizing *transchotomies* and other pioneering configurations of knowledge, particularly inside socio-semantic sites. *Transchotomies* may be defined simply as socio-semantic networks of three or more concepts, articulated by logical relationships. *Transchotomies* are situated, in the contemporary system of thought, beyond dichotomies, hierarchies and taxonomies, three of the dominant concept constellations of modernity, and beyond folksonomies, the predominant system of concepts within post-modernity.

Our contemporaneity is also partly founded in *mashup cultures* (Sonvilla-Weiss, 2010), which means cultures that hybridize other cultures. Within this social context, a feature of the global knowledge circulating in Web 2.0 and augmented in Web 3.0, is the *hybridization of knowledge* (e.g. a fusion of scientific, technological and artistic types of knowledge). Such process produces content and configurations often innovative, frequently through creative destruction of former information and even former knowledge's. For example, at *Google*, any user, using simple digital methods, can search very sophisticated information and knowledge, and discard other data not anymore useful. Such process was previously used mainly by scientists in their researches, or by technical staff in professional technological environments, or by writers and artists in the construction process of their fictional, visual and audible environments. Nowadays, in *Wikipedia*, the user advances one more step, that is, he builds real *common concepts*. In other words, conceptualization is no more originated solely from specialized scientific theory and theorists, resulting from pure or applied research. In sum, the *daily fictions* developed at Web 2.0, are recently being articulated with everyday *common knowledge*, which is more present and structured at Web 3.0.

In fact, a second trace of innovative ordinary knowledge, is that it relies more on Web 3.0 than on Web 2.0, and is based more on *interpreted accounts* and not just on told stories. In other words, these accounts can be displayed and demonstrated as ordinary or specialized, professional or personal, published or publicized, proposed or referred, for evaluation by the group or self-assessed, etc.. This is partly the case of *professional digital auto-biographies* or digital Resumés posted on the site LinkedIn. In one hand, they function as part of a strategy of direct promotion of institutional and professional careers, in order to be seen and interpreted by a wide audience. However, in the other hand, they may be used for publicizing alternative profiles. Other interpreted accounts are tales on everyday life, digital and visual stories placed in *Facebook*, *Twitter*, *Flickr* or *Vimeo*, in order to build the image of an individual or social groups and communities within networks. Similarly, such social or individual images can follow a creative destruction paradigm or a counter-hegemonic pattern, according to the specific economic, political and cultural conjuncture underlying specific sharing processes within social networks.

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A third trace of this emerging mode of knowledge is the increasing ubiquity of *games*, e.g. adventure games (role playing games, etc.), as well as the generalization of *interactive storytelling* as a means of knowledge access and interpretation, as pointed out in the previous examples of experimental interactive fiction. Both of these devices, gaming and storytelling, fuse / hybridize playfulness with narrativity, often within Web 2.0 digital social networks, but, increasingly, inside the Web 3.0 social and semantic-logical sites.

The precedent considerations have been used for the construction of a *Semantic-Logical Sociology*. This is a sociological posture that is focused on the study of semantic and logical processes / social relations that impregnate our contemporary societies, such as those above debated. Some application examples were made to science and art museums, and also to the current political situation, where democracies face and confront fundamentalisms (Andrade, 2011a).

Question 5: A ‘Lay Researcher’ Within a Research Society?

Let’s retake and develop some ideas previously sketched. Through the referred collective and hybrid networked dialogues and fictions, the common citizen is becoming a legitimated *common writer* and, in particular, a banal storyteller? And, by means of *lay ontologies* (that is, sets of ideas and concepts constructed by common people) and other hybrid procedures invested in social networks, this cultural citizen is transforming himself, somehow, in an *ordinary researcher*?

Hypotheses

Hypothesis 5.1: Non-specialists are becoming smarter than experts.

We are testifying multiple social innovation processes where innovation is produced and consumed through a creative destruction process, inside a counter-hegemonic strategy. In fact, lay writer/researchers are edifying a collective ground where occurs a fusion or hybridization between experts and lay people, in many spheres of daily action, narrative and conceptualization. This happens in a more meaningful way in terms of knowing, and in a more political style in terms of power.

If this is true, what are the effects that cultural and artistic innovation, and their scientific-technological and artistic means and methods, produce in the city socio-cultural fabric, especially regarding the regeneration of the urban public sphere? For example, such objects and cultural events may (or not) restructure obsolete models or build novel *paradigms of information, communication, knowledge and innovation*, embedded in the urban/urbanistic space and in the everyday life of social networks constructed by local communities, neighborhoods, residents or tourists?

In other words, and as noted above, are we immersed in a sort of fictional and/or research society, where the specialist of a given scientific, technical or artistic profession, is confronted with a *lay researcher*? In fact, today most of the residents, tourists or even immigrants, can *research and collect data in the city, often in very similar terms to the scientific, technical or artistic expertise*. To do so, they often use a mobile phone, an iPhone or other mobile device for a first-hand collection of information sources. And they produce content in terms of a *common writing* in the Internet, in particular in the context of Web 2.0. In this regard, observe the cases of *definition of common concepts* in *Wikipedia* operated by any user; the analysis, interpretation and reorganization of everyday sources of information in blogs; or

the construction of ‘*common theories*’, through the clouds of concepts or ‘tags’, organized in sites such as the seminal ‘*Del Icio-us*’.

Hypothesis 5.2: Within post-colonial societies, non-specialists are still far from challenging experts.

Inside the contemporary social arena and postcolonial landscape, not every individual and culture can access to multiple research procedures and methods, contributing in a collaborative way to a common fund of knowledge. In other words, the common citizen within peripheral countries is not always emerging as a sort of “co-ordinary writer,” “lay artist,” “ordinary technician,” and “common scientist” – in other words a competing and complementary figure to the professional writer, artist, technician, or scientist in those world areas..

However, counter-hegemonic processes are growing within some post-colonial societies and cultures. In fact, where democracies arise, increasingly more common agents are challenging the power of experts in several social areas (economic, political, cultural, etc.). E.g. through micro searches using the Google search engine (which is already, in part, a ‘semantic engine’) or applying other methods, ordinary citizens often originate a sort of ‘*common search/research*’ involving actions, ideas, concepts, methodologies, and devices that may promote discovery and even innovation.

These lay actors often face (and other times hybridize), the following modes of knowledge: (a) on the one hand, their common knowledge and the respective micro research; (b) on the other hand, the professionalized literary, artistic, technological, and scientific production; (c) and last but not the least, religious forms of knowledge, which often constitute the most problematic obstacle to the common knowledge spread.

Nevertheless, as these social and cultural processes move forward, it is conceivable that the frontier between expert and non-expert knowledge and action will fade to a certain degree, with as well postcolonial societies becoming a huge ‘*research society/community*’ or at least a space for open socio-intellectual flows and mobilities, that may implement development and some retreat of fundamentalisms.

Question 6: Hybrimedia Within Open Research?

As one of the features of this new social paradigm (the Research Society), the very nature of media has undergone remarkable and irreversible transformations?

As noted above, nowadays new types of media emerge gradually, and can be designated, in general, as *hybrimedia*. Multimedia juxtapose various media, but without significant reciprocal relations. For its part, hypertext establishes links among several texts, and hypermedia connects different medium. However, unlike all these kinds of media connection, hybrimedia articulates media of different nature, fusing them to hybridizations that are dissimilar from the departing media, and transforming them into unique media: that is, the originating (initial, seminal) media is transformed into an original (new) medium. This may occur by devaluation, *mashup*, hybridization and destruction of the previous media, and by the creation of a new revamped thing. Such process is much more intense than what happens in multimedia, hypertext and hypermedia. In other words, creative destruction or counter-hegemonic movements are the two possible faces of the hybrimedia phenomenon.

Hypotheses

Hypothesis 6.1: Open research adopts and adapts open media and open knowledge.

For example, a *multitouch interactive table* was developed in a project funded by Foundation for Science and Technology (Lisbon), entitled *Public Communication of Art* (Andrade, 2016a). It is consultable at the following *social semantic site*, at section 3.2.1 (Idem, 2011e). This research exemplifies *Open Research*, which is an hermeneutic and heuristic strategy publicly accessible to all publics, that occurs largely in Web 2.0 and 3.0 social networks. Such open research was first targeted to an audience visiting an art exhibition in 2010 that presented works by the artist Joana Vasconcelos at Berardo Museum, Lisbon. The multitouch table hybridized visual and tactile media to something original, a new vision of the artist's visual works, through the use of hybridmedia. Other examples of hybridmedia can be accessed at *Experimental Books social semantic-logical site*, 2.1. section: 'Hibrimédia' (Idem, 2011f).

More open research reflections on hybridmedia are possible. For example, its connection with *digital co-ordinary literature* within the context of post-colonial societies linked with the Social Web 2.0 and the Semantic Web 3.0. This emerging digital conjuncture produces and makes possible the sharing of '*transmediatic knowledge*' (Andrade, 2014). Another debate in this direction is about *e-tourism*, a mobility digital process that engenders dialog and conflict e.g. among cultural e-tourists and cultural e-heritage institutions. In particular, the role of *innovative cultural mobilities* using hybridmedia and mobile devices is depicted through cultural e-heritage discourses and counter-discourses (Andrade, 2017a).

Hypothesis 6.2: Hybrid arts are discussing new social/cultural meanings through hybridmedia.

Sociologists may articulate, on one hand, post-colonial theories and concepts to, on the other hand, the analysis and interpretation of exemplificatory film images that testify post-colonial representations produced and reproduced both by colonizers and colonized peoples. Such modes of representation and presentation often define hybrid arts such as post-colonial cinema, that sometimes may use hybridmedia (Andrade, 2016b)

In fact, the "clash of civilizations," to use a notorious Samuel Huntington's concept, often takes the form of a *conflict of meanings*, that is subjacent to all images, in a greater or lesser extent, as Homi Bhabha has argued. Thus, discursive resistance against colonialism may rely on mobilizing *hybridization*. And for Nestor Canclini, contemporary cultures are essentially "hybrid cultures".

As previously discussed, hybridization is a mode of knowledge and action associated with the hybrid, where social actors, while merging their essences and experiences, generate new productions and reproductions of themselves. This hybrid nature is present in most resistance cinema or visual arts images, that is urgent to underline.

In this hybridization process, and according to Bhabha, knowledge "denied" by the colonialist power returns and may suggest alternative "*rules of recognition*" for the contemporary postcolonial societies and cultures. Such idea can be useful, especially if we articulate it with the more political approach to resistance advocated by Edward Said and others.

Thus, for example, it is crucial to analyze central oppositions transmitted by resistance cinema's authors, such as "colonizer/ colonized", "identity/difference," "power/non power". At the 'spectator' side, every

cinema viewer, in the case of *resistance cinema's publics*, may see and criticize, in a participatory way, world visions and discourses vehiculated by the cinema imagination and/or engagement, contributing, in a collaborative way, to a common and global fund of critical culture and knowledge.

FUTURE RESEARCH: INVESTIGATION AND TEACHING ON INNOVATIVE SOCIOLOGY OF INNOVATION

In the next paragraphs we will present two personal experiences as researcher and teacher, that may clarify future applications of the above discussion, within both research and educational practical activities and actions.

Coda 1: Innovative Sociology of Innovation may emerge as a promising innovation instrument and a stimulant Open Research attitude.

In order to edificate possible routes to such Innovative Sociology of Innovation, let me develop some details of the project Public Communication of Art, mentioned above: a sociological research was conducted, concerned both utilitarian and poetic uses of new media devices and internet by visitors of Museum Coleção Berardo, Lisbon, Portugal, in March 2010 (Andrade, 2016a). Within this perspective, two main aspects were considered:

1. A founding theoretical question, among others: how visitors (families, tourists, teachers, students and other visitor profiles) use digital devices and internet in new ways, for exploring, communicating with and understanding a cityscape? In the case of tourists, the articulation between the destination locality and the departure society and culture was problematized.
2. A methodology: how to delimitate new media and web methods' for gathering, analyze and interpret data? As an empirical example, the study analyzed the process of discovery and interaction with visual art works, inside a museum and using a fusion of new media resulting into hybrimedia, concretely a multi-touch interactive table, a multi-touch questionnaire, an interactive game and an Art Ontology on line. We noted above that *ontologies are some of the core instruments applied by internet users for knowledge innovation*. They constitute promising contributions for research in all area, including Social Sciences, and were defined as interpreting instruments that: (a) beyond their seminal philosophical connotation (i.e. the reflection on being); (b) received recent and useful applications within new media social arenas, and specially for structuring Web 3.0 or Semantic Web sites. In Social Sciences, particularly inside Sociology and Communication Studies, Sociological Ontologies are perceived as sets of concepts and relationships that are used: on one hand, in theory, to organize content meaning and argumentation structures in a particular area of sociological knowledge; on the other hand, in specific projects and empirical field work, to interpret meanings inherent to specific content of social discourses.

The research team interviewed the museum visitors with video devices, at the very moment they were using the multi-touch questionnaire in the interactive table, asking them an opinion about such interactive devices. Researchers then compared this visual and interactive questionnaire with a classical

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questionnaire (that was as well made at that exhibition including questions and answers registered in text), to look for possible advantages and flaws of each one of these modes of scientific and artistic dialogue.

The results were gathered in a site and knowledge base allowing remote consultation and comments to the content that was generated at the empirical field.

Coda 2: Digital culture may be taught both at cyberspace and at cybertime.

The following suggestion is just a clue for eventual future directions of teaching on Innovative Sociology of Innovation. And, naturally, for research directed to pedagogical applications, as well as further teaching to educate promising young researchers.

Cyberspace is a configuration of public, cultural and educational space, that is now widely inserted in university curricula at the levels of Licence/Master's degrees and PhDs. However, you can not teach or investigate cyberspace without considering *cybertime*. As mentioned earlier, cybertime may be defined as the set of social times or diachronic courses (rhythms, silences, accelerations and other time frames) that take place within social spaces or synchronous paths (websites, blogs, social networks and other spatialities) traveled by internet users.

At the University of Minho, Institute of Social Sciences, Braga, Portugal, inside Communication Master's course, year 2013-14, an educational laboratory was introduced in the Chair 'Cybercultures'. The aim was to investigate and teach cyberspace dynamics articulated to cybertime and activated within digital and virtual cultures. A methodology was applied in the context of Digital Humanities using analysis and interpretation of sources for sociological research in Communication / Cultural Studies (Andrade, 2017b).

Specifically, teacher and students applied a software that allowed the construction of *knowledge bases* and *Sociological Ontologies* in a specific Sociological field, Cyberculture. Typically, a knowledge base converts information into knowledge, by defining, within a text, the main concepts and relationships among such concepts. Nowadays, at the internet, users are constructing, more and more, knowledge bases in several areas. Therefore, the practical uses of this methodology may be very diversified: postgraduate education, research, training of human resources in companies and other organizations, institutions, associations, NGOs.

From a practical and substantive point of view, such methodology is intended for discourse analysis of texts, images, videos and web pages included in internet's cyberspace and cybertime. The themes discussed at chair Cyberculture were: Sociology of learning / research in cyberculture rhythms and routes. Cyberculture public spacetime: control and surveillance in Mediapolis and post-panoptisms. Economics of cyberculture's spatiality / temporality: globalization and technocapitalism, convergence and remediation, digital divide, cyber-consumption in the risk society. New powers in cyberspace / cybertime: e-policy, e-governance and e-democracy. Citizenship / activism in digital synchronic / diachronic dimensions: tactical media, hackers, cyberwar / terrorism. Body / post-body within the city and internet scapes / durations: digital identities, ethnicities, gender, sexuality and feminism, cyborg, non-human and post-human. Cyberculture / subcultures of the virtual steps / beats: digital aesthetics, cyberpunk and literature, new media arts, leisure and digital knowledge, video games, blogospheres and social networks.

CONCLUSION

In the precedent debate, we put several questions and formulated correspondent hypotheses in what regards the innovative role of users, within the creative destruction process among information and knowledge flows that are happening across social and semantic networks. Hypotheses played the role of possible and never definitive answers, a stimulus to eventual developments of the issues detected.

However, some limitations subsist, due to the complexity and novelty of the phenomena analyzed, and the consequent openness of the questions here circumscribed. Some hypotheses tried to mitigate doubts and go further. Considering such reality and perspectives, one future way to surmount these social problems and sociological limitations is to subscribe a Sociology that reflect partly on social innovation and, in so doing, constitutes itself as a *Sociology of Innovation*. In fact, within this route towards a desirable excellence, may it become an *Innovative Sociology*, i.e., a producer of theories, concepts and methodologies never before seen or imagined. This can be done, among other paths, if the sociologist reflects with an open mind, within an Open Research that uses open knowledge elaborated in open access. One theme for this Innovative Sociology may be creative destruction, but articulated with the counter-hegemonic processes that can be implemented by common citizens, within the public sphere where democratic actions and dialog may occur.

In sum, the author hopes that Innovative Sociology of Innovation and methodology based upon Hybrimedia and Hibridology, may arise as some of the most fruitful contributions for the generalized spread of democratic flows of knowledge, within social and semantic networks that partly characterize our contemporary interconnected world.

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KEY TERMS AND DEFINITIONS

Counter-Hegemonic Flows: Citizens and internet users develop strategies in what concerns the production and consumption of information and knowledge, sometimes defying the hegemonic ways and methods of coping and controlling data and knowledge.

Creative Destruction of Information: This signifies that information flows associated with digital social networks and the correspondent consumption of information are being dialectically annihilated in part, and often transformed into knowledge flows.

Geo Stories: These are fictions inherent to the retelling of our everyday stories at or about specific locations, related to the friction mobilized by the public opinion of ordinary people, regarding such narratives.

Hybrimedia: This concept means an *original* (new) fusion of media whose nature is different from the *originary* (native) media that formed it.

Innovative Sociology of Innovation: This is a creative style of making sociology about innovative social processes, that is emerging itself as a promising innovation instrument and a stimulant open research attitude. An example is semantic-logical sociology, a posture that reflects on the social and semantic processes subjacent to Web 3.0 networks.

Lay Researcher: The common citizen is becoming a legitimated common storyteller, writer, and researcher. For example, by means of “lay ontologies” (i.e., sets of concepts forged by ordinary people in Wikipedia) and other hybrid procedures invested in social networks.

Open Research: This is a genre of research that profoundly uses open access to open data and open knowledge.

Research Society: A societal paradigm where ordinary citizens can turn into non-specialist journalists and researchers. In fact, common people may create testimonies, comments, and critiques using portable computers and mobile devices, sometimes anticipating the news coverage undertaken by media professionals, or the publication of scientific research results developed within the university.

Social Innovation: In contemporary society, this process occurs within global communicative networks, and involves not just informational flows, but more and more knowledge flows, in order to transform a given aspect of social reality.

Web 2.0: The so-called second age of the internet, that had a notable development after 2001, and where users became apparently more active than in the precedent decade. That is, besides reading information, they write content (e.g., posts and comments in blogs or messages to other users in social networks [Facebook, etc.]). That’s why Web 2.0 is also named “reading/writing internet.”

Web 3.0: This network mode is censed to foster a new style of reception and production of information, knowledge and meaning. It is often nominated Semantic Web because its main aim is to construct social semantic sites and networks where their own underlying model of meaning and knowledge is manifest and described.