



Pedagogic, Social And Ethical Storytelling Modes of Intervention and Participation Within City Spaces and Times: A Geo Novel for Augmenting Urban Heritage Literacy

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Abstract

Objectives: The present text discusses some connectivity between two socio-cultural territories: urban arts and digital technologies' spaces and times. More specifically, pedagogic, social and ethical storytelling modes of intervention and participation within the city, are here understood as hybrid manifestations of tangible and intangible heritages. For instance, *material heritage* such as public arts (monuments, statues, murals, street art, graffiti, stencils, etc.) are used to dialog with *immaterial heritage* (beliefs, symbols, etc.) including either legitimated or marginal meanings, through diverse types of literacies. A *literacy* may be defined as a strategy of teaching and learning, through daily practices of reading and writing, inside a given mode of knowledge. E.g., scientific, technological, artistic or urban knowledges may generate the correspondent scientific, technological, artistic or urban literacies. In this essay, urban heritage literacy and artistic/literary literacy may be hybridized and activated in diversified ways.

Method: A case study is proposed here by using a novel methodological instrument, an urban *geo novel*, that may convey original meanings configurations. This is a novel based on hybrid urban contents, spaces and their times. Its aim is to interpret, understand and learn the *literacy of city's everyday heritage*. In fact, daily life is based, among other pillars, on daily spaces and times. Such tool is presented as an *urban social and ethical novel*, constructed via a mobile iPhone to take photographs, that are connected, via a software, to city maps that show the images localization, by using GPS (Global Positioning System).

Result. It works socially as an admittedly different novel, within a contemporary world where blogs, social networks and other emerging devices (political-discursive, scientific-technological, ethical and literary-artistic devices), have radically changed our regime of production and enjoyment of information (through Big Data or inflation of data), and of significations (via an excess of concurrent and sometimes useless meanings known as Big Knowledge), inside the urban global and local fabric.

Impact on stakeholders: The above-mentioned verbal and visual literary production's name is '*GeoNeoLogical Novel*'. Such denomination is founded on 3 main dimensions underlying it: *space* (represented by the prefix Geo); *time* (Neo), and the communicative relationship between *social authors*, *social actors* and *social readers* of the novel. This interactive mediation is represented by the term *Logos*, a word of Greek origin that signifies 'discourse', 'reason of language', 'language of reason', etc.).

Keywords: Pedagogic-ethical city; Heritage literacy, Urban public arts, Urban storytelling, Geo Novel, Social authors/actors/readers

1. Introduction

1.1. Pedagogic, social and ethical storytelling modes of intervention in urban space: city and public arts literacies between legitimacies and marginalities

Paulo Freire (2005) argues that learning and teaching are intrinsically articulated. A teacher may learn from their students if she/he opens her/his practices and thinking to different roads that students take in order to learn. Some of such paths are located within the everyday and public urban fabric. And inside city networks, the arts constitute a powerful way of intervening, particularly through public art. In fact, public art is increasingly being fabricated to pedagogically and ethically participate not only in terms of political citizenship, but also to act in the context of *cultural citizenship*. And this social mobilization is undertaken both by legitimate powers and by the various urban marginalities. Thus, it is possible to find a *legitimate public art* and a *marginal public art*, which raises new answers for old questions, via public opinion inside *creative cities heritage* (Andrade, 2010a).

When one seeks to reflect on this reality, for instance in the field of Social and Human Sciences, public arts provide not just objects of study, but also concepts, methods and other research and pedagogic instruments. In addition, at the confluence of arts and science, literature, and *visual literature* in particular, constitutes an artistic device that testifies and clarifies social and cultural realities, in a sometimes surprising way. As such, it can constitute a reliable method for reflecting, teaching and learning on society processes in general, about social structures such as culture, communication and information, or on significant socio-cultural practices and agents. For example, public and private social spaces, public and private social times, and public and private social meanings, are some of the elements that can elucidate how society works. In other words, these informal experiences contexts may augment the *literacy on the city heritage*. A literacy is a strategy for socially and individually teach and learn how to read and write within a given mode or type of knowledge. For example, the practices of reading and writing science, technology and arts, use, respectively, scientific, technological and

artistic literacies. In order to articulate and communicate meaning among people with different qualifications and experiences, the *everyday literacy* is particularly efficient to connect the other literacies configurations, thus working as a sort of literacies 'Esperanto'. That's the case of social and communicative dimensions of daily consumption, citizenship and culture that is subjacent to everyday *heritage literacy*, present at scientific museums, which can be studied by relating *musealization* (methods and techniques of museum management), *museability* (social conditions of musealization) and *literacy of Science and Technologies* (Andrade, 2010b).

Inside this perspective, through a *hybrimedia novel* (or, more precisely, built via a fusional hybridization of media, named *hybrimedia*), social structures and practices can be activated, taught and learned within their spatial and temporal contexts, public or private, where meaning circulates. Such informal learning works through ordinary people's social activities and their micro urban actions. In some way, they perform as social (and somewhat fictional) characters, who embody knowledge within their everyday life's spaces and times, often through social urban stories that each actor is constantly telling and retelling to other social agents. All the above considerations may be taken as social and sociological foundations of a *pedagogic and ethic novel's* creation. In order to illustrate such ideas, this text presents an *urban pedagogic novel*, aiming to implement, teach and learn *urban heritage literacy*, that is, reading and writing, practicing and thinking, the city fabric, through urban public images, texts and other media, that constitute applications of two different and often opposite learning devices: (a) the discourse of *legitimate public art*, for example, photographs of statues and monuments; and (b) the counter-discourse of *marginal public art*, such as graffiti and stencils, or even social images of the *cultural citizens* themselves, be them legitimate agents or des-legitimated actors. More concretely, urban public spaces may constitute pertinent places to teach and learn not just *human rights*, but also *cultural rights* and *heritage rights* (Andrade, 2010c), via urban novels, targeted to and activated by migrants, tourists and other nomadic social actors circulating across the city public sphere.

Therefore, such novel, in addition to its artistic objectives, also intends to serve as a *sociological hermeneutic dispositif*, that is, a novel genre of digital method for the singular understanding of 'real' social worlds within contemporary public space, as well as of 3D virtual worlds or metaverses within cyberspace and public/private *cyber-time*. This last concept means the social and digital rhythms that a user activates when she/he circulates inside cyberspace. For example, via a digital web story plot developed inside a social network. Through such approach, and specially using *GPS geographic technologies*, the literacy of the urban heritage may be better understood and practiced by diverse city stakeholders.

1.2. Brief state of the art

Cultural Heritage Education through Geospatial Technologies

Several Text Books and Readers introduce the contemporary area of Cultural Heritage, such as the *Companion to Heritage Studies* by Logan et al (2015). It transversely articulates world heritage, cultural preservation, environmental protection, ethics, human rights and tourism, using the experience of professionals from international institutions, for example UNESCO, ICOMOS, and national states and civil society stakeholders.

As for *cultural heritage education*, the study by Camilla Casonato and Bertrando Bonfantini (2022), focuses on the lost heritage of impoverished urban areas, such as city suburbs. The authors reflect on the value systems related to tangible and intangible heritage, which promote intergenerational and intercultural interactions, for instance in the case of children and young people participation within practical heritage education actions. More specifically, about *technologies and cultural heritage*, Georgios Styliaras and other Editors (2010), highlight the role of information communication technologies. This impact is demonstrated via case studies and examples collected from archaeological sites, public buildings, museums, artistic events (festivals, etc.), which work as heritage education and participation spaces.

In what pertains to *geospatial technologies*, their applications to concrete knowledge areas education and training is paramount. Not just good practices inside their

more profoundly related disciplines, such as Geographic Decision Making (Donald, 2012), but also pertinent uses in other sciences, technologies or industries.

Some of the most central candidates to the above mentioned strategy are *Social and Human Sciences*, A. Milson (2008) underlines the relevance of geospatial technologies in social studies education, reporting the impact of the standards movement developed by the international geospatial education community. In particular, such geospatial technologies are useful for teaching and learning economics, environmental science, history, geography, among other disciplines. The role of teacher preparation is here crucial.

Another area where new spatial technologies, such as geographic information systems (GIS), prove indispensable, is *archaeology applied to heritage research* (Tapete, 2019). Research on Earth observation (EO), remote sensing (RS), and geoscientific ground investigations put together geographers, anthropologists, archaeometry and remote sensing experts, around GIS, archaeological fieldwork and historical maps, among other methodologies and techniques. Case studies include UNESCO World Heritage Sites, remote archaeological areas in central America, European countries and south Asia. All this knowledge is applied to the education and training of site managers, e.g., on legal aspects of their heritage preservation intervention.

Within our contemporary urban fabric, *Architectural Heritage* is being revisited. Digital Research plays a core role in this area education (Münster, 2018). Some illustrations encompass architectural and urban cultural heritage; organizational points-of-view, technical access; systematization; education in urban history. Yet other decisive territory of intervention is *Geographical Heritage* associated with *Geotourism* (Singh, 2020). On this behalf, some perspectives include socioeconomic, ecological, geographical, geomorphological and touristic aspects of natural heritage. Professionals in geoheritage conservation and preservation are debating geodiversity, geographical heritage sites, geomonuments, geoparks and geotourism, in order to apply such contributions to education and recreation.

Last but not the least, the debate on the *Ethics of Cities* is crucial. Timothy Beatley (2024) recently discussed issues connected with ethical dilemmas and value conflicts concerning the urban. He argues that to plan administrative dimensions is not enough, and the governance of cities should take into consideration ethical questions, in order to edify more resilient urban planning, social justice and ethical communities. For instance, the ethics of public space, confronted with privacy, crime, racism and climate change, to name just a few. And Juliet Davis (2022) argues that a philosophy of 'urban caring' is a possible solution against inequality and exclusion, in the development and management of the city environments and communities, challenging the neoliberal thinking of urban planners and academics.

Research in Portugal: the literacy of city heritage interpreted via GPS and other technologic spatial methods

On his side, the author of this text developed a continuous research on Urban and Cultural Sociology, for teaching and learning *city heritage literacy and ethics*. For example, and besides the texts cited above, about the *Interdimensional City* and everyday public and pedagogic practices on heritage (Andrade, 2018a); and problematizing the social, ethical and *Sociological city*, or the polis understood as a sociocultural heritage context and context (Idem, 2018b); other reflections and case studies apply social sciences for an *innovative teaching of heritage* (Idem, 2019); or interpret everyday urban heritages as social actors' *bodies experiences and empowerment* (Idem, 2022); in addition, *decision-making learning* may be achieved through a serious game about an *art museum* named 'Sociological Research Game' (Idem, 2023). Moreover, urban heritage spaces and times, articulated with policies, politics and politicians, may be interpreted via literature, or more precisely, through *literary literacy*. For instance, in the case of a book on the politics of austerity in Portugal in 2013, conveyed by a new literary genre, *Sociological Comics* (Idem, 2015); and within a post-colonial environment (Idem, 2014); or by means of a *Geo Novel*, which signifies a novel that uses maps and G.P.S., within a storytelling narrative, as a method for creating an urban everyday story that teaches *urban cultural heritages literacies* (Idem, 2011). Such approach will be exemplified and detailed in the next sections.

2. A pedagogic and ethical urban novel to augment literacy of public/private heritage urban spaces and times

The novel here presented is not just for reading text within a mere written and read literary work, but also works for visually watching and socially sharing. In fact, it may be used: firstly, as a *pedagogical and ethical tool* for augmenting citizenship, intercultural interactions, cultural heritage education, and to develop value systems related to tangible and intangible heritage (Casonato, 2022), in particular urban everyday literacies; secondly, as an *ethical instrument*, for enhancing the governance of cities' public space, through 'ethical communities' (Beatley, 2024), and via 'urban caring' to minimize inequality and exclusion (Davis, 2022); thirdly, it applies *Geospatial Technologies* (Donald, 2012), such as GPS, to a user friendly interface.

Its name is '*GeoNeoLogical Novel N° 1*', in the sense that it works as a '*deixis*', which is a Greek philosophy concept that signifies the articulation of space, time and *logos*, this last word meaning both language of reason and the reason of language.

As it will be seen below, such novel tells an *urban cultural, political and ethical story*, deconstructed and reconstructed by applying three main *social, literary, storytelling, and pedagogical dimensions: space* (represented by the prefix 'Geo'); *innovative time* ('Neo'), and the communicative and ethical relationship between the literary author and the social actors within the novel (represented by the term *Logos*). Such social dimensions may circumscribe either a legitimated discourse, or a marginalized counter-discourse.

At first, the author of the actual text named this experimental novel 'GeoNovela', as the action takes place in real sites that are inserted into a fiction woven on the computer through a GPS geographic system. However, this term and its prefix 'Geo', although somewhat pertinent, prove to be insufficient, because the novel shown here does not deal just with geographic space, but as well with various dimensions of reality articulated with various dimensions of fiction. This aspect of the inter-dimensionality of literary works has been highlighted in

several public presentations of this work, since its first showing at the Acta Media 2009 event, promoted by the University of São Paulo and held at Casa das Rosas, São Paulo, Brazil, on 8 and 9 August 2009. In addition to the novel first dimension, that is, the geographical socio-cultural spaces (*GeoNovela* level), a second dimension includes diachronic socio-cultural times (*NeoNovela* dimension); and a third dimension contains social subjects and complex fictional characters, such as the 'author / reader/ social actor' trichotomy (i.e., the *LogosNovela* dimension). A trichotomy is simply a relationship between three ideas or concepts.

2.1. Hybrid Plot

In terms of content and plot, this experimental novel revolves around a traumatic event: the *death of the author* by an ordinary citizen, on a normal street, using an ordinary pistol (see Figure 1). Through dialogues, the urban

novel characters try to discover who will take the place of the missing author: whether it is only the reader, as Roland Barthes (1973) would say, or equally any ordinary person, actor or social or cultural agent, who would emerge as potential candidates for *Hybrid Characters* integrated into the narrative (see 2.2. section).

2.2. Hybrid Characters

During the search for types of socio-literary characters to be found within the actors of everyday life and of the geo-neo-narrative, hybridized old and new types of fictional characters appear on the scene, in plural figures of *Hybrid Characters*. In effect, in addition to (a) the traditional heroes of the Greek epic narratives, the antagonists of the protagonists; (b) the anti-heroes à la Dostowesky; (c) the mentors, the destiny-givers, etc. highlighted by Greimas (1976), (d) various examples of these Hybrid Characters emerge today, as is partially

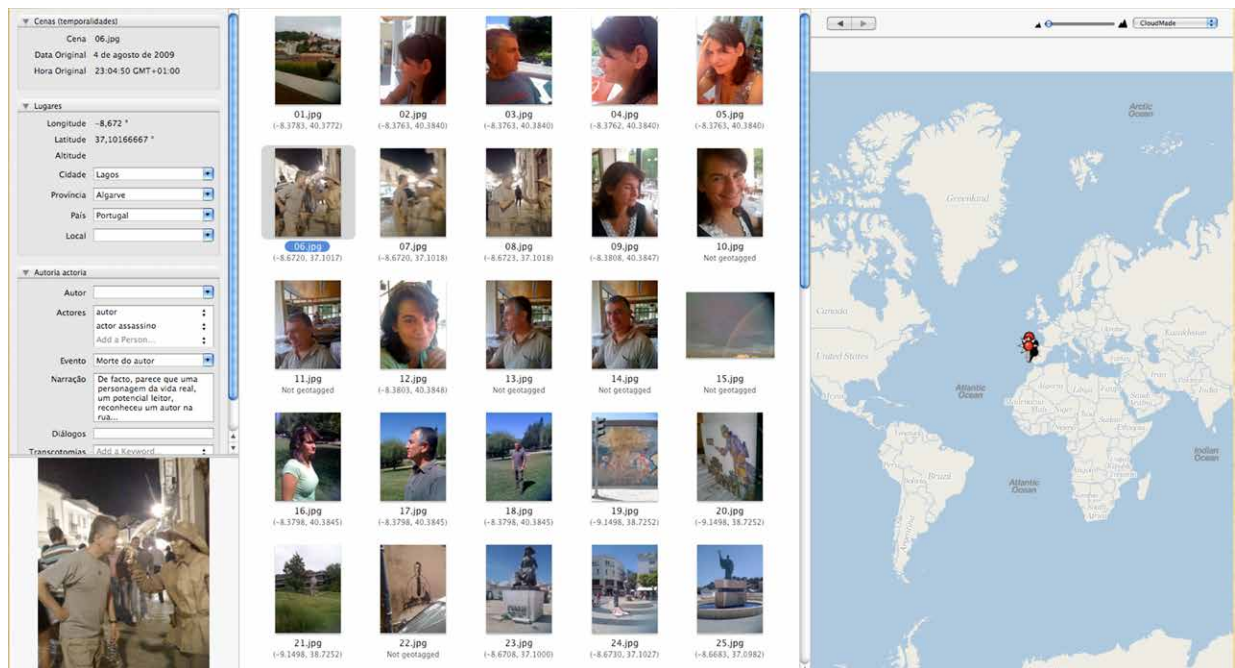


Figure 1: the GeoNeological Novel N° 1, plot

seen in the GeoNeoLogical Novel: for example, *common heroes, the assistants of common heroes, the alter-heroes, the assistants of the alter-heroes, the assistant-heroes, the author-readers, the reader-authors, the author-actors, the actor-authors, the actor-readers, the reader-actors, etc.*

2.2.1. Heteronymy of authors and actors

Fernando Pessoa himself (see GeoNeoLogic Novel's Scene 29 in Figure 2), speaking from a wall social space within the novel storytelling, since he speaks via the voice of a graffiti/stencil character, says the following: "... in addition to my heteronyms as an author, I now have multiple heteronyms as an ordinary social actor, like any person or any character in a short story, novel or romance." In the context of the GeoNeoLogical Novel, Pessoa refers to the *urban heteronymys* that emerge from the various representations and presentations of his person in various graffiti or other incarnations of this author inside public spaces across the city.

Therefore, the GeoNeoLogical Novel is not so much an author's novel, nor even a reader's novel in the sense of Roland Barthes (1973), but essentially a *Hybrid Novel*. In other words, it unveils characters who often coincide with the common citizen, inside the current intercultural world of the 21st century. In this regard, a diabolical clown, on another graffiti wall and in novel's scene 39 (cf. Figure 3), announces and states: "- In short, the characters rebelled against the author...". And perhaps as well as against the reader and the author, stripped of their complementary condition as common social actors.

2.3. Hybrid Interface

As for its structure of its interface, the GeoNeoLogical Novel is organized, as above mentioned, in the form of *deixis*, that is, the process of articulation between time, space and the subject or subjects that circulate across them.

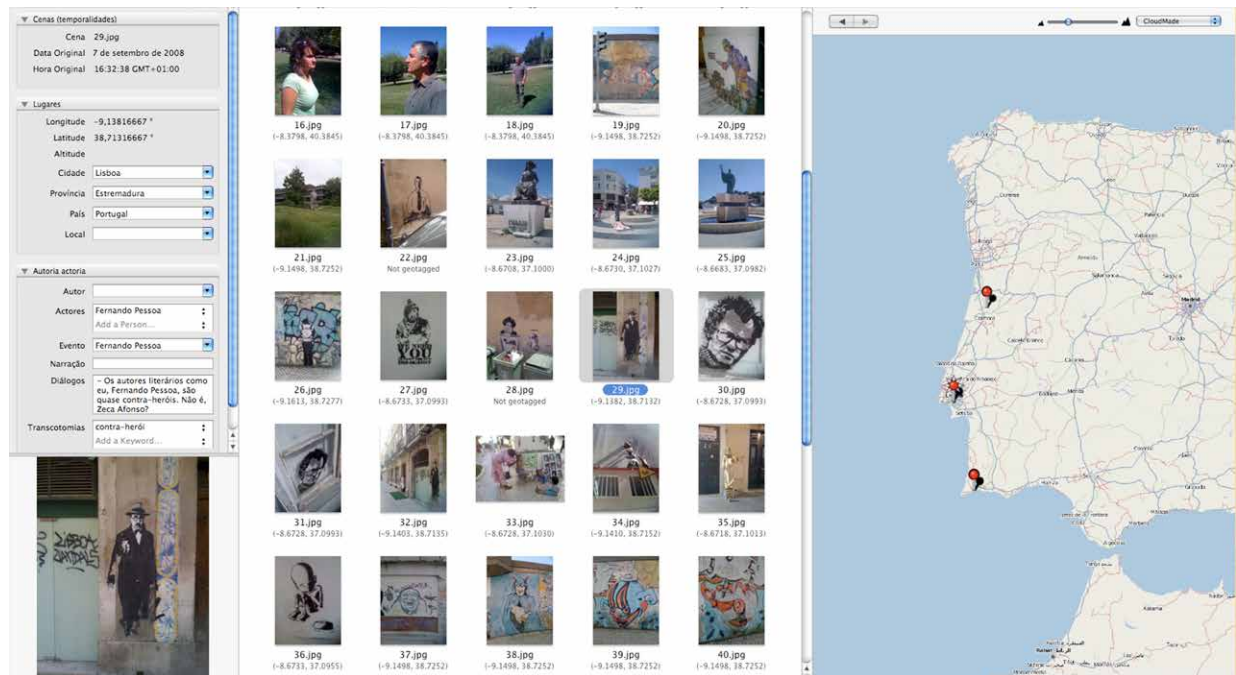


Figure 2: the GeoNeoLogical Novel N° 1, hybrid characters

Time: if we look at the image of the GeoNeoLogical Novel in Figures 1, 2 and 3, we will notice that the day and time of the photographs taken on characters, places and objects, is recorded at the top left of the interface.

Space: just below the temporal or diachronic data, the location or synchronic data of these social data's records in the real world, is indicated by the name of the respective places.

When a scene in the GeoNeoLogical Novel is activated, the map on the right transports the user to the corresponding spatial location, at a global, national or local level: in the latter case (Figure 3), the exact place on a city street, identified by a GPS system. This confluence of space-times also takes up and applies the concept of 'chronotope', forged by Mikhail Bakhtine (1981; see also Bostad, 2004).

Subjects language, reason and meanings: in the GeoNeoLogical Novel, the characters can be common social actors, known, recognized or unknown, without excluding the author himself, or animals and objects, or even the social and geographic places themselves.

For instance, the author of the GeoNeoLogical Novel himself suggests the following, during the action: "I think we have to redo not a genealogy of the author, as Michel Foucault (1969) would say, but a kind of Geo-Neology of the author." (see novel scene 11). "In this case, 'Geo' means searching for the author in all the places and paths of social life on the planet, to find out where he appears and shines through, sometimes transformed into hybrid or cybrid forms." (in novel scene 13). 'Neology' here means this: if the author has died, totally or partially, it is necessary to know that new names or neologisms of authorship emerge today (new types of authors, readers, socio-cultural actors, etc.). " (consult scene 14).

Therefore, *GeoNeoLogism*, beyond the name of a style of novel never seen or read before, constitutes a more comprehensive strategy, extendable to all knowledge and ways of social life. In other words, it is necessary to demand the new authors, readers and actors who populate our urban daily lives, within the economic, ecological, communicative, political, discursive, cultural, artistic spheres, etc.

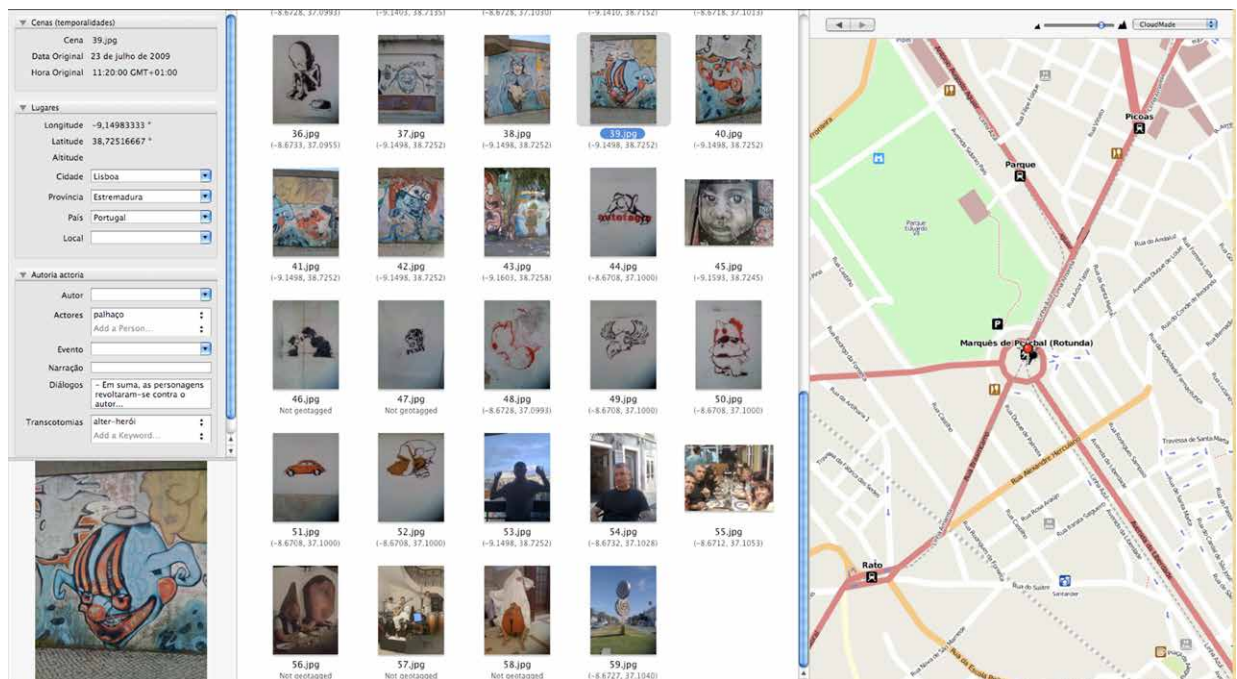


Figure 3: the GeoNeoLogical Novel N° 1, interface

2.4. Transmedia pedagogic-ethical literature

In addition, *transmedia pedagogic-ethical literature* and storytelling is understood as not fixed in a single medium, but in several media, and not being characteristic of any of them. On the contrary, it acquires a nomadic nature, grounded in multiple social fabrics that produces and reproduces it. One example is precisely the GeoNeoLogical Novel nº1, which, in terms of a literary transmediation genre, besides the novel in book form or *Book Novel*, can take the configurations of *eBook Novel*, *Film Novel*, *Web Novel*, or even *Mobile Novel*. Such versions defined in 2009, are included on a 2012 website, that complements this novel book in paper. Furthermore, such intrinsically *hybrid and intercultural novel* cannot be understood without its social, communicative and sociological pedestal.

First of all, here is a brief modus operandi in order to enjoy this novel: the reader can read it through at least four *regimes of literary reception-production*, in sequence or alternately. Such ways of understanding literature are called '*modes of reading/writing*', insofar as the current reader no longer reads passively, but actively. That is, in addition to reading, she/he also 'write', whether mentally through reactions to the text, or physically, for example by writing descriptive, analytical or critical notes about what she/he actually reads.

3. Reading/writing modes

Reading / writing modes include several types (see Figure 4), such as:

3.1. Fictional and meta-informative reading/writing mode

As stated above, regarding the novel interface, the fictional text presents, in each scene, 3 articulated '*vertical reading paths*', each of them using a specific form of language, and referring, to a greater or lesser extent, to the dimensions of 'space', 'time' and 'logos':

A. A first *text*, of a 'linguistic' nature, that is, it uses a 'native' or 'national' language, e.g., Portuguese or English. This text was in turn deconstructed into several subtexts of different nature, be it narrative (the mention of the main events), dialogic (the dialogues of the characters) and meta-informative. Metadata is information

about information, for example the index of characters in a novel, the summary of an essay on literary theory, or the tag or keyword in a blog about a novel. In this case, metadata relating to the three dimensions of the novel are used: time (Neo), space (Geo) and the relationship between the author and the actors in the novel, such as the reader, the characters or the author himself and her/his language (Logos).

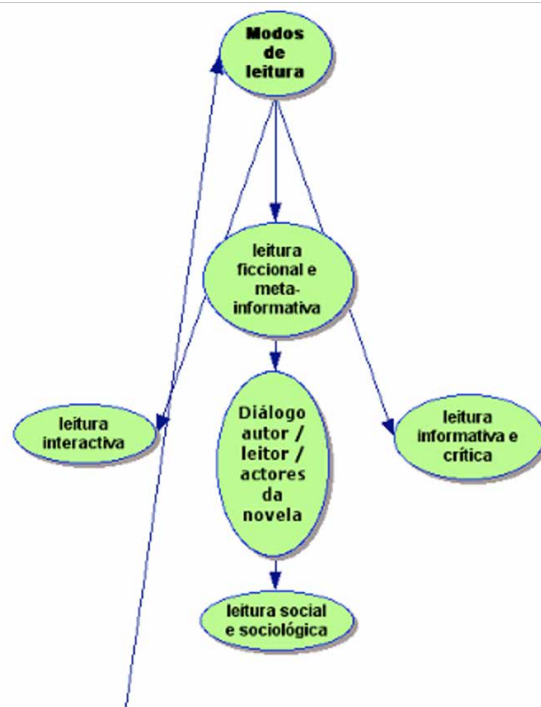


Figure 4: Reading modes

Source: GeoNeoLogical Novel nº1, page 9

B. A second 'text' uses the visual language inherent in *photographs* of the characters (people, animals, inanimate beings, etc.) and settings (space or synchrony) of the scenes (time or diachrony) of the novel.

C. A third 'text' uses the language of *maps*, which represent the (temporal) course of the (spatial) paths of the characters inside the novel, and across their daily lives within the real world, which thus partially coincides with the fictional world, as will be seen below. The novel's author associated the photographs with their location on the street or the area of the city where he took them, using *geotagging software*, which allows the association of significant *keywords* (tags) to a given place. The plot,

the scenes and the actions of the characters are distributed among these 3 contemporary itineraries of fiction. Hence, the novel editing is not just a 'parallel editing', as Eisenstein filmmaker creatively suggested, but also an interdimensional editing within the novel 'montage'. That is: (a) the central *photograph* functions as a pivot articulating, on the horizontal axis of the synchronic space of the plot, both (b) the *text* and (c) the *maps*. On the diachronic or temporal axis of the plot (here shown both horizontally and vertically in each scene) the novel presents, in that particular scene, some central photographs that represent the current action or events of the plot. This photograph is preceded and followed by others, which correspond to the past and future closest to the action taking place.

3.2. Social and sociological reading/writing method

This novel does not end here, in this physical book, nor is it exhausted by the relationships among an author and one or more readers. As you will see when reading it, the GeoNeoLogical Novel maintains a close relationship with the life and cultural and urban citizenship of our contemporary societies and their characters, essentially the Hybrid Characters, inside the contemporary era of interculturalism. Therefore, this *literary novel* is in a permanent and *social novel* state of foundation and fusion. More concretely, such a citizen reading method is taking place in the time between this GeoNeoLogical Novel No. 1, forged in 2009, and the next ones, to be published later.

This first version aims to present and represent the current situation of the ideas generated around the GeoNeoLogical Novel. It can be used within the framework of research projects using digital media, and to augment ideas for participatory classes at various levels of education. Since this is a prototype, there is still only one author, but future versions may include experiments activating collective authorship within social networks and other media devices.

However, in order to start this possible author-reader dialogue from the several reading/writing modes, the author will now provide some elements and tools to undertake an informative and critical reading mode, one

that could allow a dialogical interpretation of this novel. A dialogical interpretation or hermeneutics means an exchange of ideas between an author and his readers, included in the literary work itself. So let's talk together, and not speak in isolation. In effect, 'isolated' is synonymous with 'exile'.

3.3. Informative and critical reading/writing mode

Every efficient pedagogy must be based on strong concepts, that may represent and partially abstract a concrete social reality. In order to clarify some of the specific and empirical ideas underlying the way the GeoNeoLogical Novel may be practically used, several concepts are developed below.

In other words, in the following pages, some detailed indications are provided, regarding various characteristics of the GeoNeoLogical Novel, and the social and cultural context in which this novel was written is introduced. In this way, the writer inoculates, in addition to his fictional text, a kind of *pre-criticism* of that text itself. In other terms, the fictional text is here accompanied by a critical device that could be called *fiction friction text*, which connotes the underlying conflict between *self-writing* and its *auto-criticism*.

3.4. Interactive reading/writing mode

As stated above, the GeoNeoLogical Novel was already digitally activated via diverse softwares in 2009, including keywords, text, photographs, maps and GPS technologies (translating latitude, longitude registration, etc.). Moreover, a paper book version was published two years later (Andrade, 2011). The upcoming GeoNeoLogical Novels will include more digital interactive solutions, such as digital games, playable on the Internet, on a desktop computer, on the iPhone, on the iPad or on other digital platforms, and Generative Artificial Intelligence experiments, considering not just A.I. and its advantages, but as well its evaluation and ethics, in two words, a *Critical AI*.

4. Common writing and lay authors using hypertext / transmedia in Web 2.0

The classical debate between modernity and post-modernity has been exhausted some time ago, due to the reductionism of the defenders of each of these perspectives. In fact, neither of them completely cancels out the other. On the contrary, in this era of interculturalism and constant hybridization, we are witnessing the articulation of these positions, in what has been called *intermodernities*. One of the characteristics of intermodernities is the hybridization of the roles of social agents. For example, at many moments in their life, an author may establish himself as a reader and, by extension, as a social and cultural actor. And vice versa.

Let's see: in the 1990s, the activities of Internet users were more focused on consulting information and less on its production. In other words, the info-user read more than she/he wrote.

In the following decade, the so-called *Web 2.0* emerged, which includes, among other characteristics, the following: the user participates more actively in the production and dissemination of content, by writing messages of all kinds, within blogs, digital social networks, etc.

In other words, in this 'new era' of the Internet, we are witnessing the emergence of a common form of writing, constructed, reconstructed and deconstructed by ordinary users, *lay authors* who now compete with traditional specialist authors, such as science, technologies and arts professional writers.

Among other writing activities within Web 2.0, literature is proving to be one of the most interesting. Therefore, it is crucial to research new modes of hypertextual writing/reading and using hypermedia, in this age of common and ordinary authorship.

The concrete forms of this never-before-seen writing/reading, and particularly in the case of literary and hypertextual writing/reading, are based on original paradigms of organization/structuring of information, knowledge and narrative, such as *folksonomies*, in various configura-

tions, which will be defined and exemplified in some detail below.

For this text author's part, and more specifically, he is working on prototypes to produce not new novels, but *new types of novels*, where he will use specific methods of organizing concepts, plots and literary rhythms, such as *transchotomies*, also explained below.

Considering the context of contemporaneity, the following seminal question may be risen: in what way and with what style are we reading and writing within the scapes of Web 2.0, full of blogs, wikis (for example, Wikipedia), microblogging (Twitter, now X), etc.. And, in doing so, how do we metamorphose ourselves into *ordinary authors*?

In particular, how do we construct / reconstruct / deconstruct scientific, literary or other meaning types, when we use tags or bookmark a web page, or when we index information at the same time as we read/write on a blog?

To understand this recent processes, consider the time when our modern information systems emerged. With regard to the organization of information in 19th century libraries and universities, hierarchical information systems (the CDU and Dewey *classifications of knowledge*, etc.) were predominant for indexing sources. Classifications use different classes or levels of generality, such as 'Literature', and specificity, such as 'Portuguese Literature'. In other words, they constitute hierarchical systems for storing and searching information.

In the 20th century, the alternative of other systems for organizing information, such as *thesauri* and their respective 'descriptors', emerged. These are non-hierarchical sets of related concepts describing a given area of knowledge, such as the Visual Arts. A thesaurus makes information searching more efficient, because a document can be indexed by two or more descriptors, and not reduced to just one class.

5. New configurations of knowledge

In a more synthetic way, in the modern era, *taxonomies* corresponded to hierarchical information systems, apparently emerging as the main legitimate way of thinking and structuring knowledge (Cf. Figure 5). This typically occurs within scientific knowledge, but also happens inside the field of arts or in others, such as the area of theory and practice of documentation in libraries and archives, mentioned above, specially in the case of documents classifications.

However, in recent years, *folksonomies* have become popular since the advent of Web 2.0, that is, the internet where digital social networks emerged. Folksonomies may be defined as hypertextual and hypermedia webs of common people’s concepts and ideas, with which every ordinary user can comment on a piece / tool of

internet information. For example, inside a web page, a blog or a digital social network, Wikipedia, etc., tags and bookmarks constitute the new instruments and ways of dealing with information and common knowledge, naturally including their advantages and disadvantages. Therefore, even if a user doesn’t want to use such new devices of knowledge and power, it is important to notice and hopefully know how to use them, and/or express an opinion on them.

To be more specific: in modernity, we are accustomed to thinking using not just taxonomies, but also *hierarchies*. A third typical configuration of modern thought is the opposition between just two poles of meaning, which is named a *dichotomy*. This modern naturalization of hierarchies and dichotomies derives from Aristotle and, since Descartes, they not only predominate, but dominate our thinking.

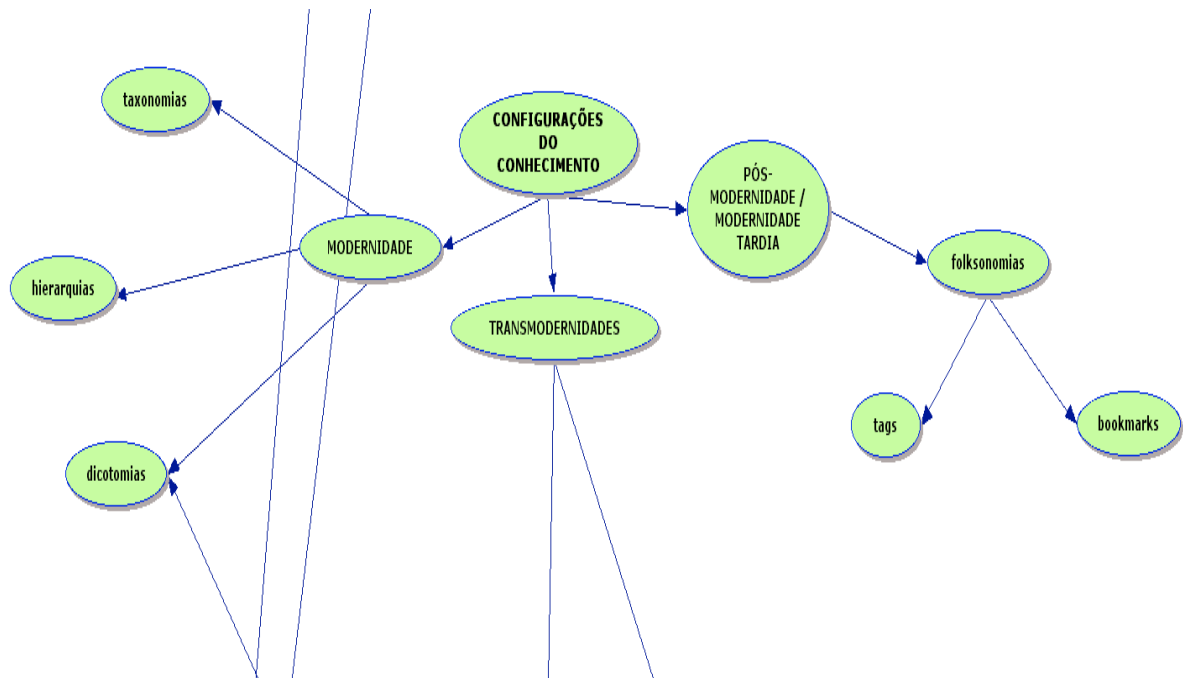


Figure 5: Knowledge configurations
 Source: GeoNeoLogical Novel n°1, page 17

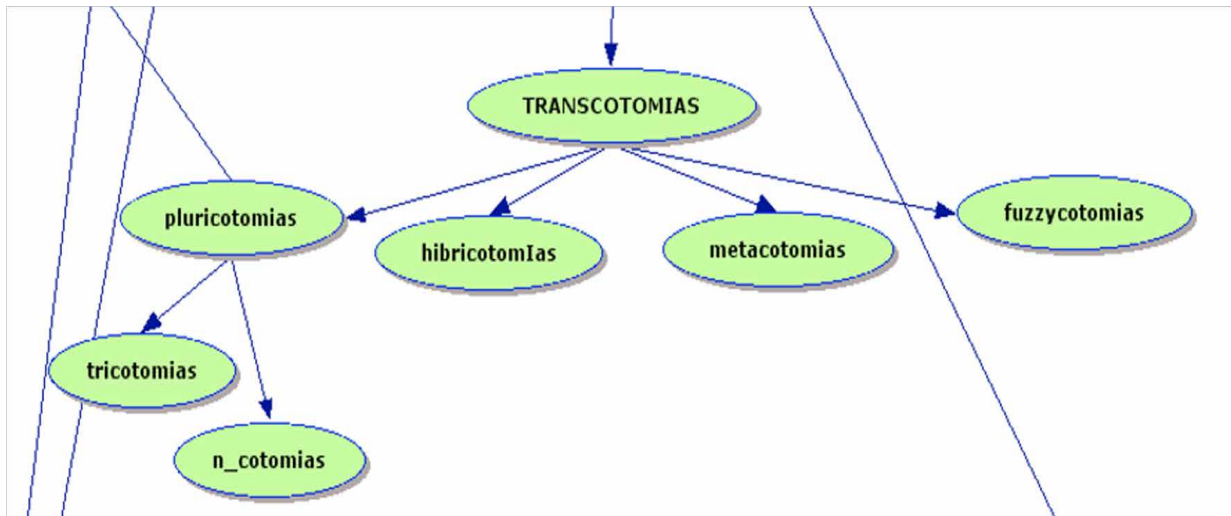


Figure 6: Transcotomies types

Source: GeoNeoLogical Novel n°1, page 19

However, within postmodernity or beyond, it is possible to think in other ways, for example in the form of more complex social and conceptual networks, that disseminated novel modes of dealing with information and knowledge globally, that will be examined as follows.

5.1 Transcotomies

Nowadays, transcotomies emerge as some of the most recent textual, hypermedia or transmedia forms of structuring scientific, technological or artistic information and knowledge (consult Figure 6).

But what exactly does this expression mean? Transcotomies take on various forms and configurations that go beyond the mere dual distinction between taxonomies and folksonomies, which, in itself, is still a dichotomy. Besides that, it is useful to distinguish several types of transcotomies, such as: *plurichotomies*, *hybrichotomies*, *fuzzychotomies*, *metachotomies*, among others.

The GeoNeoLogical Novel'1 constitute one of the possible examples of transcotomies' uses, within the social urban fabric.

Pluricotomies

Firstly, plurichotomies are textual, hypermedia or transmedia organizations of social concepts that use more than 2 ideas, whether opposed or not.

For example, configurations of 3 concepts are called trichotomies: in social life, the "father-mother-son" triad, or, in cinema, the famous "love triangle" composed of husband, wife and housewife, are examples of trichotomies. Or, even the famous trilogy of novels published by William Gibson, or the 3 important literary awards he won.

Within specific information systems, plurichotomies can be used also to describe images, including everyday cultural scenes in the city, in a way that classical classifications or thesauri don't reach.

Hybrichotomies

A second illustration of transcotomies are *hybrichotomies*. This last term signifies textual, hypermedia or transmedia constellations of social realities and their concepts, that articulate two or more types of knowledge, and through such movement they may transform the very nature of each one of its components. For example, in Second Life, users belong to the (so-called) "physical world", and avatars are associated with the (so-called) 'virtual world'. Even if these virtual 'worlds' are lived through the imagination of the players, the information they transmit is very real. Thus, the natures both of the real and the virtual worlds, may be transformed

through the participation and actions that are played by members of the 'real' world within the 'virtual world'. Within such context, the single term's class (or a concept descriptor, keyword or tag) named 'virtual reality' is clearly insufficient to describe this idea.

In other words, information mediators (librarians, computer scientists, art curators, etc.), as well as ordinary users, must know how to deal with these new challenges that are metamorphosing our information and knowledge systems. For instance, how can we interpret a game that includes 'virtual or augmented reality' as an 'edutainment device'? Edutainment games would be more effective or affective if they include virtual or augmented reality? And should they be named 'Virtual/augmented reality games', or other denomination?

Fuzzychotomies

A third figure of transchotomies is *fuzzychotomies*, which mean the textual, hypermediatic or transmediatic organization of concepts articulated at random. For example, Artificial Intelligence tried to understand our decisions based on chance through fuzzy logic and expert systems. And lately, Generative Artificial Intelligence such

as Chat GPT, are experiencing other novel random procedures, even in more sophisticated ways.

In this sense, how can we translate the random articulation between the information and knowledge, included daily in blogs, wikis or other social networks, in a clear way?

Metachotomies

In addition, but no less important, a form of transchotomy named *metachotomy*, organizes, textually, hypermediatically or transmedially, information and knowledge, on two or more levels of the same, similar or connected realities.

For instance, when a scientist talks about his own activity (science), she/he can produce a meta-relationship between the 2 levels of her/his same reality: (a) the author of knowledge and (b) the product of knowledge. In fact, epistemology, reflexivity, or other scientist's self-reflection configurations about her/his own scientific work, are typical 'meta-knowledges' (meaning a knowledge about other knowledge), a 'super-knowledge' that includes related concepts on different levels of meaning, that is, via metachotomies.

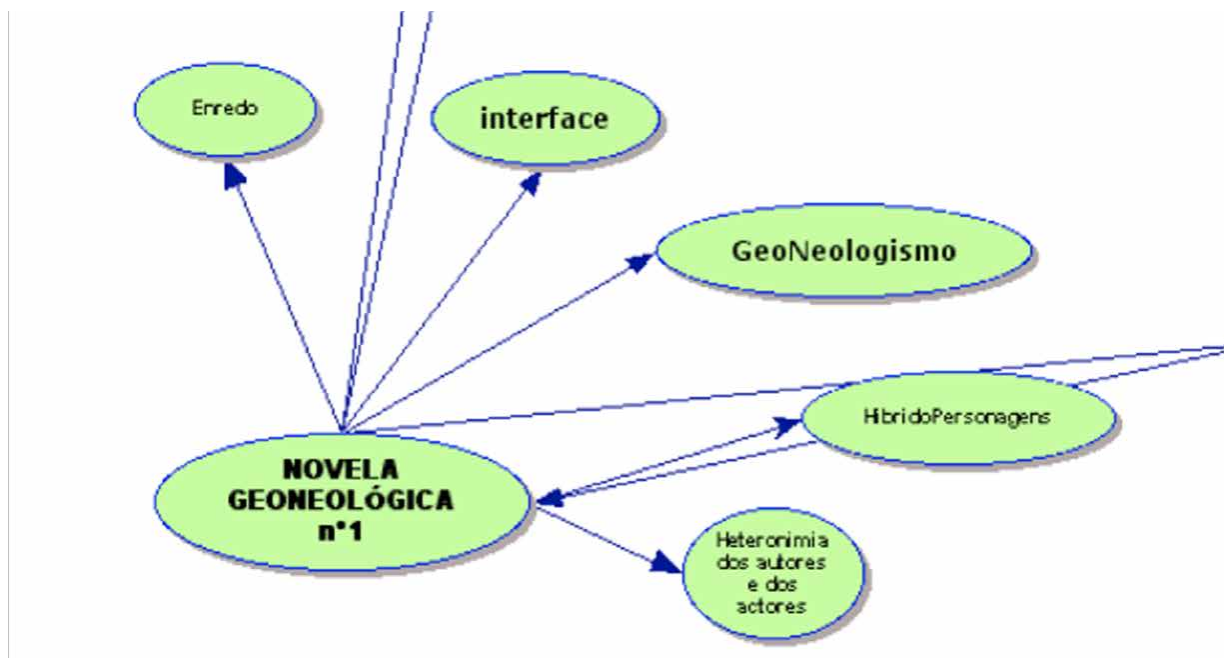


Figure 7: The GeoNeoLogical Novel 1 dimensions
 Source: GeoNeoLogical Novel n°1, page 21

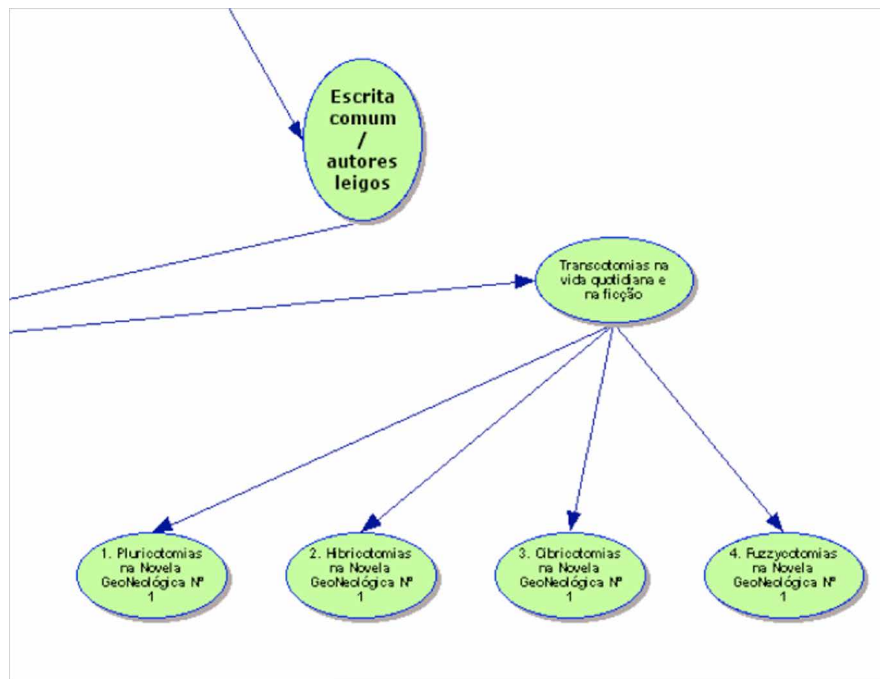


Figure 8: Transchotomias within the GeoNeoLogical Novel n°1

Source: GeoNeoLogical Novel n°1, page 24

In other words, can we think of methods to describe these various levels, without reducing everything to the old and somewhat simplistic notion of 'metadata', which signifies data about other data, such as a keyword about an author idea?

5.2. Transchotomias in everyday life friction and fiction

It was discussed above that transchotomias are configurations of concepts that go beyond taxonomies, hierarchies, dichotomies or other dominant conceptual relations within modernity. But where do these figures of knowledge networks fit into this literary plot of the GeoNeological Novel, based on the socio-cultural networks that were mentioned here? To answer such question, let's revisit to some of the novel's most recent conceptual networks:

Plurichotomias within in the GeoNeoLogical Novel

As explained above, plurichotomies may be knowledge networks, within the novel, formed by more than 2 con-

cepts. For example, several scenes in the GeoNeological Novel show groups of 3 actors, that is, trichotomies, whose ternary form is important for understanding their socio-cultural role, such as a triangular family formed by a father, mother and children, which constitutes a historical figure legitimized by Roman Law and one of the pillars of modernity.

Hybrichotomias in the GeoNeoLogical Novel

On its turn, hybrichotomies signify conceptual networks that, within the novel, mix or fusion the nature of two or more members. Now, in the GeoNeoLogical Novel, each social actor can be blended into an author. In other words, these two subjects hybridize themselves during the nove's action. Another example: the GeoNeoLogical Novel shows parts written in *Portuglish*, meaning a hybrid language between Portuguese and English. The GeoNeoLogical Novel thus belongs to the lineage of *hybrid literatures*.

Cyberchotomies inside the GeoNeological Novel

Cyberchotomies are defined as a particular manifestation of hybridotomies, the ones that creolize the real world with the virtual world. Within the GeoNeological Novel, the real space of the characters, based on photographed ordinary citizens, merges with cyberspace, when the novel is presented on a computer connected to the Internet.

Fuzzychotomies in the GeoNeological Novel

Fuzzychotomies are understood as networks of knowledge that organize concepts in a random manner. Here they may connote the deepest sense of the GeoNeological Novel, the collaborative and participatory dimension. In other words, after the first author create her/his initial scenes, anyone who reads this narrative may collaborate on it, based on photographs that (s)he collects and sends to the novel's author, possibly including a narrative comment or a dialogue, to the author. Such contributions may be then added to the GeoNeological Novel in future versions. Based on these random complexities, at the whim of the network, a novel knowledge will be deconstructed, constructed and reconstructed, via this novel, thus building infinite fuzzychotomies.

After all, the present urban novel may weave the social and cultural network of these characters not so much in search of an author, but in search of Hybrid Characters who seem to have outlived the author. In other words, we are all, sometimes in our lives, simultaneously or not, authors, readers and actors, insofar as, when embodying actors or socio-cultural agents, we are 'reading' the urban and the virtual inscriptions sketched by other city inhabitants, and 'writing' daily stories across our interactions with others. The GeoNeological Novel n° 1 merely makes this very real process more explicit, a process at times so implicitly encrusted in our socio-cultural routines, that they become barely visible in our daily lives. In short, any inhabitant or citizen of the city can become a kind of *common actor-author*, and a literary hybrid or cybrid. Thus, through the GeoNeological Novel:

(a) the *autoria* (authorship) of *actoria* (actorship), may be revealed in some way, as meaning the regime of the author who assumes himself as a banal social actor.

(b) and vice-versa, the *actoria* of the *autoria* is manifested, via the social and everyday device formed by the set of common actors that act on the condition of the author.

(c) in the same way, the *leitoria* (readership) of the *autoria* signifies the influence that the reader ('leitor', in Portuguese) produces on the author. Here, it means the writer considered as in his hybrid condition of author-reader-actor.

(d) and, finally, the *leitoria* of the *actoria* translates the conditioning through the reader's reading, about the common social actor condition.

In short, fiction and its reality, writing and its social, cultural and political critique are based on and merge with the work of art itself. For more details on the relationships between authorship, actorship and readership, see (Andrade, 2010d):

6. Conclusion

Multiple pedagogic and ethical modes of storytelling intervention in urban spaces and times may exist, or co-exist. Some of those constitute relevant tools for understanding the possible modes urban heritage literacy or informal city learning.

The GeoNeological Novel 1, debated here, constitutes an urban novel that may contribute to augment the contemporary regime of production and enjoyment of meanings and knowledge, within the city fabric, in order to write and learn ethically the city's everyday life heritage literacy. For such aim, it uses a GPS system, to relate such teaching and learning to specific social and urban localities spaces, times and languages, discourses and counter-discourses.

To activate this novel, social agents may use a mobile phone to take photos and videos, and send them to other urban actors, so that they can share their own experiences, and augment their citizenship participation. Public art is just a mean, method and target of such activities, here illustrated. In the future, other urban realities may be scrutinized by multiple *social actors*, who may be transformed, by this hybrid and intermedia strategy, into more democratic and ethical urban *social authors*.

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