3rd International Conference on Environmental Design

3-4 October | Marsala - Sicily

MDA
MEDITERRANEAN DESIGN ASSOCIATION

PALERMO UNIVERSITY PRESS

IIIrd International Conference on Environmental Design
A cura di Mario Bisson

Proceedings (reviewed papers) of the IIIrd International Conference on Environmental Design,
Mediterranean Design Association | www.mda.center | workgroup.mda@gmail.com
03-04 October 2019, Marsala, Italy

Progetto grafico ed impaginazione: Martino Zinzone
Immagine di copertina: Mario Bisson | Martino Zinzone

PALERMO
UNIVERSITY
PRESS

ISBN STAMPA: 978-88-5509-060-5 | ISBN ONLINE: 978-88-5509-063-6

Viale delle Scienze, Edificio 16 (c/o ARCA) | 90128 Palermo
Published in September 2019

3rd International Conference on Environmental Design

Conference proceedings

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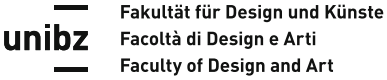
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Special thanks to:

Giorgio Di Crescienzo for supporting the translation of the introductory contribution

INDEX

Introduction to the Conference

Visual, Haptic and Urban Design

Color | Light | Architecture | Landscape | Design for the common good

Technology of Innovative Materials

Surface design | Multisensory experience | Environment and society

New Frontiers

Product design | Human society 2.0 | Open Innovation

Communication Experiences

User experience | Virtual learning environment | Identity and otherness

Design for Social Innovation

Political design | Co-design | Service design | Culture 3.0

Health Science

Well-being | Design for all | Advance simulation

From data gate to story gate Territory Visualization Models and Processes for Design Driven Actions

VINCENZO CRISTALLO [A] | MIRIAM MARIANI [B]

Abstract

The territory is a real and rhetorical place where the relationship "product-context-identity" materializes (Cristallo, 2004, 2014). The reading of a territory is a complex interpretation in which is necessary to reconstruct the accesses of the "communicative landscape", a "territorial deposit" of resources resulting from stratifications. Information Design - as a project of visual syntaxes and narrative sequences - has the role of deciphering Data Gates, communicative passages offered by the territory-system, configuring Story Gate and staging storytelling models that make the complexity of the data presented intelligible[1]. This conceptual path is conducted with the aid of case studies, projects and experiences whose "communication base" is a factor to favor the development of the local environment.

[A] VINCENZO CRISTALLO
Architetto e PhD; Professore Associato | Dipartimento di Pianificazione, Design e Tecnologia dell'Architettura dell'Università Sapienza di Roma (Italia)| vincenzo.cristallo@uniroma1.it

[B] MIRIAM MARIANI
PhD Student | Dipartimento di Pianificazione, Design e Tecnologia dell'Architettura dell'Università Sapienza di Roma (Italia)| miriam.mariani@uniroma1.it

KEYWORDS:

| *Data Gate*
| *Story Gate*
| *Information Design*
| *Communicative Landscape*
| *Community Mapping*

Introduction

In Alberto Magnaghi's words (quoted in Villari, 2012) the territory is an independent entity capable of evolving, converting, and consequently designing and planning itself. A territory, moreover, that is constantly conditioned by the changes induced by anthropic actions and by the constant combination of tangible and intangible values whose roots are its own memory. A collective memory (Halbwachs, 2001) which requires to be communicated and, before that, codified by establishing the specific identity requirements. The identity of a territory represents a broad system of gifts and abilities given to us by the course of events and the overlapping of historical and cultural experiences. A unique heritage reproduced in images and symbols, in physical and environmental elements, in goods, artifacts, in experiences that have marked its life, development and relationships (Cristallo, 2011).

But if the material composition of a territory is intelligible, its communication is more problematic because it is not just a matter of narrating artifacts, services or events but also defining a more articulated communication plan. This is why the "communicability of a territory" - intended as a system of iconemi, elementary units of perception, significant elements at the base of the semiotic analysis of an organized space (Turri, 1998) - has among its prerogatives the possibility of

being able to composing a "communicative landscape", that is interpreting and representing the qualifying properties of a territory to produce "areas of meaning" and "shared visions" so that these same properties can be correctly visualized for those on the territory who must act through planning behaviors.

- ***Visualize the territory***

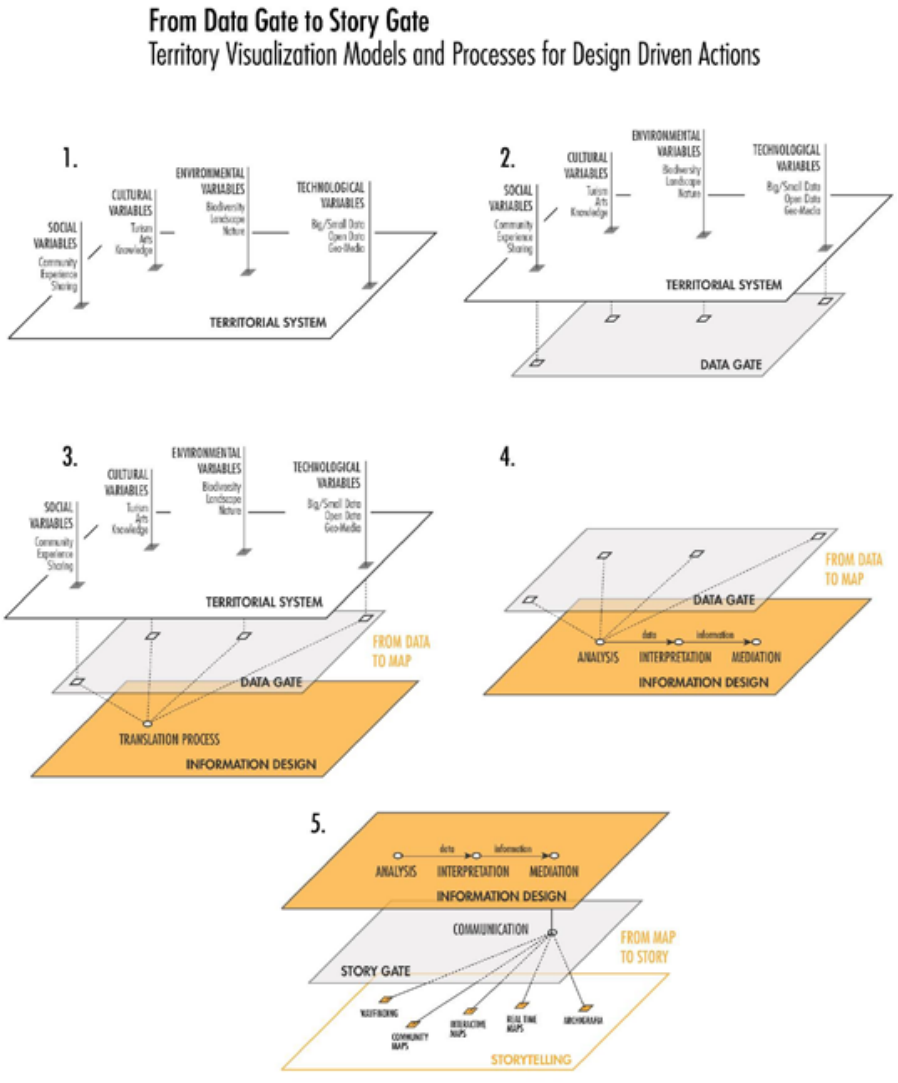
A communicative landscape can define two configurative models: on the one hand, to make the territorial organization visible through its real, rhetorical, qualitative and quantitative components (the so-called resources of the "territorial deposit"); on the other, to distinguish the values of the practices of communities present in order to increase the knowledge and enhancement of the territory in order to achieve a site consciousness (Magnaghi, 2010).

Knowing the territory and disseminating it are therefore two operations that require suitable tools to proceed according to "visual" methods - as perceived objects - and "conceptual" methods - as a result of the social and cultural values of a community (Cristallo, 2014). In order for this to happen, it's required the development of an adaptive communicative language which is constituted as the result of a process based on the resolution, simplification, mapping and encoding of data, as suggested by Paul Cox[2], (Corraini, 2016): a process that starts from the observation of reality - according to quantitative and qualitative data - and arrives at its reproduction through an abstraction operation. If Gillo Dorfles (1962) identifies in the signs the mediation between the subjective conscience and the world of phenomena, because they are essential tools at the base of every communication; and James Gibson (Farneti P., Grossi E., 1995) underlines how the environment influences the structuring of perceptive processes, it follows that the systems to be communicated are made up of flows for which it is essential to design the entry and exit doors.

They are the same gates through which the action of Information Design is inserted, which - as a project of alphabets, grammars and visual syntax to elaborate graphic and visual narrative sequences - has the role of drafting and setting up the communication of data which are offered by the territory system. It is a matter of identifying Data Gates, of proceeding by configuring Story Gate models, and then staging examples of Storytelling that make the complexity of spatial data intelligible.

Within this kind of triangle, the analysis of case studies - in the perspective of the interdisciplinary nature of knowledge - is such to portray examples of infographics projects for services, events and products, which can be evaluated as input factors to interpret the connections that exist between tradition and innovation in the development of good use practices of the territory[3].

It is a sort of path that is equivalent, finally, to compose cartographies of meaning, as a figurative reproduction of a complex space that must mediate between the subjects to be communicated and the user of the communication. As claimed by Lev Manovich, representation produces forms of simulation and control that organize the abstract data within a constructive scheme that is accessible as a graphic object (cited in Botta, 2006). Net of its interpretative nature, the cartographic representation doesn't correspond, then, to a simple objective transposition of the territory, but to its conceptual synthesis (Baricco, 2018). In more general terms we pass from the communication geography to the communication mapping[4] (fig.1).



01
From Data Gate to Story Gate. Process visualization (authors, 2019)

01

- ***From data to map***

The tool of the territory's/environment's map - meant not only as a cartographic representation, but as a conceptual synthesis of information on a specific place or phenomenon - constitutes a communicative subject which hasn't a recent development or use. From the point of view of the territory's enhancement, in fact, a consolidated practice is the "shared cartography", introduced in England during the Eighties (Scarpelli, 2011) or the elaboration of so-called "community maps", defined as "tools that inhabitants of a specific place can use to represent the heritage, the landscape, the knowledge in which they recognize themselves and which they wish to pass on to the new generations"[5] (mappadicomunita.it). These maps represent a reading plan in which the community can recognize itself within a concept of territory that preserves memory and promotes dense networks of relationships and interrelationships among the many elements that distinguish it.

A demonstration of community mapping - that is a first example of Story Gate - is represented by the elaboration of illustrated artifacts inserted in the Territorial Landscape Plan of the Puglia Region (years 2010-2013) that supports the guidelines on the management of eco-museums as shared cultural institutions, with functions of research, conservation and enhancement of all the natural and cultural assets of the Apulian territory. Inside the plan are inserted the cards of the Community Maps relating to Salento, Valle d'Itria, Capitanata. In particular, these maps are decisive for updating the cognitive framework of "local landscapes", as well as for raising awareness and cultural promotion of themes and projects that belong to the "local contexts" because they develop models of "participated cartographies" in which the role of the communities is recognizable (fig.2).

We can further recognize the so-called fifth dimension[6] (Cosenza, 2012), a popular dimension in which information passes through the analysis and communication of data in the Knowledge Society subjected to the digital revolution (Vespasiano, 2006). It's a revolution in which - recalling the role of social networks, ICT and IoT - the way of constructing the narrative is more important than the content (Beldì, 2017). We are in the Hyperhistory era (Floridi, 2014), a reality from which emerges a progressive decrease in the individual memory of human beings, of their critical and interpretative capacity, as a consequence of these communicative technologies, as well as a damage to cognitive abilities in Derrick De Kerkhove's definition of digital amnesia, or, in the words of Nora Torres, in Google Effect (De Kerkhove, 2018).

02

From above: Serre di Nevian's Community Maps; MapStory, the atlas of change that everyone can edit (International Cartographic Association)

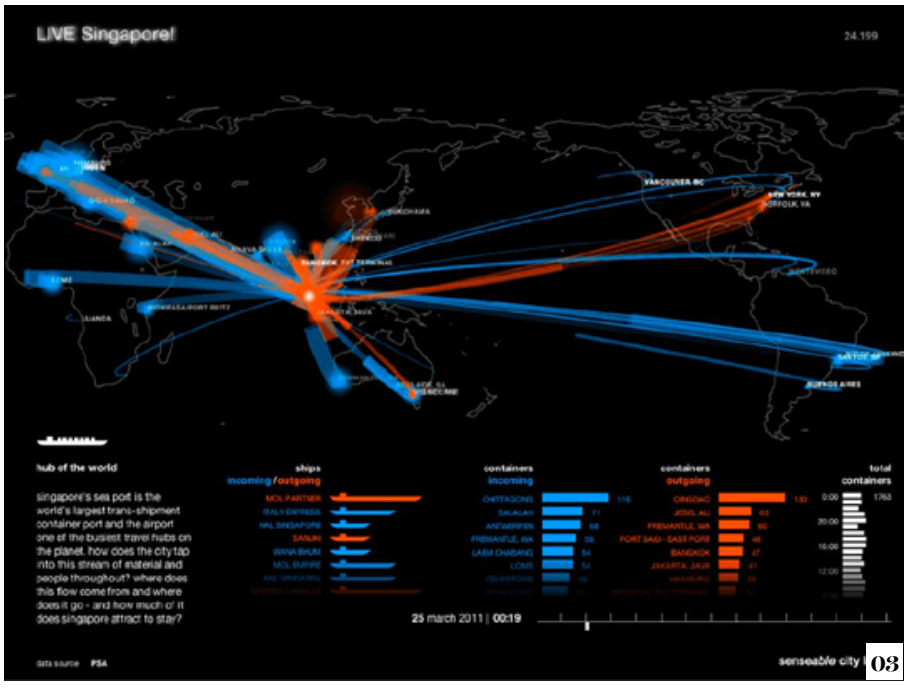
How is it possible to design the memory of a territory in the light of "data-revolution"? To cope with this research question, Design – especially through Information Design's proper methods and tools - acts as a mediator of the data phenomenon, in particular of the so-called Open Data, available and accessible in significant, and

apparently unmanageable, quantity. Michele Zannoni and Elena Formia offer a reading of the open data that result from users of a morphological and social context, referring to a set of people's behaviors, which "can help to bring out a form of collective memory that manifests itself through a real network and digital connections between individuals"(Zannoni, Formia, 2018, p.118). This reading takes up Manovich's research on data, which he defines as "geo-media: geo-localized intangible data", which bring both social and spatial information, and allow us to highlight territorial connections, networks and relationships among different realities that are part of it. In this direction, some design experiments have tried to focus on these accessible data in order to create tools for reading and interpreting the territory, involving the experiential side of the user (and thus maintaining that "participatory" approach previously identified in community maps).

A case that reflects this orientation is MapStory, the atlas of change that everyone can edit (initiative of the International Cartographic Association of 2014)[7], a digital platform in open source form that allows to elaborate narratives using an acquisition system of GIS data (Geographic Information System). At the base of this project there are the objectives of recovering the culture of the past (therefore the value of memory), of social sharing of knowledge (value of the community) and the narration of information (the identity of a territory is verified and transmitted through storytelling) (fig.2). This kind of action (the transition from an information database to a shareable narrative) is what can be identified as the passage from the "Data Gate" to the "Story Gate", or the identification of the access gates for the knowledge of the territory to carry out participated projects.

An experiment about the organization of data concerning the territory for narrative and cognitive purposes, is given by the Senseable City Lab at MIT in Boston, with its founder and coordinator Carlo Ratti. In fact, in Ratti's research laboratory, "the study of spatial data is permeated by innovative paradigms - IoT, analytics, big data - with application consequences that go beyond traditional boundaries and that [...] thanks to geo-referencing bring new business to companies, in terms of collaboration and development "(E. Misuriello, CEO of Esri Italia, interview in Caffo, 2018).

Starting from the open data that come from the use of mobile phones, or bank cards, as well as those coming from GPS, Senseable City projects develop digital and interactive visualization systems that communicate socio-anthropological information, taken directly from the data collected. According to the hypothesis that sees therefore possible the use of georeferenced open data as monitoring of people's activities in the territory, as well as on the state of the environment and of the territory itself, cities and citizens become information centers in real time. One of the series of Senseable Lab projects is "Live Singapore!" (2010)[8], an open platform that relates information coming from different urban sources in real time, able to monitor mobility, movements, flows of people, in a specific area or on a specific route. What emerges is an efficient, connected and constructive social network (Fig.3).



03
Live Singapore!
Senseable City, 2010

- ***From Map to Story***

It has already been mentioned that Information Design, as a process of reading phenomena and returning them through visual syntheses, allows to simplify very complex information to

make it accessible through a communicative project. At the same time, it is recalled how much this visual activity is necessary to give life to enhance processes on a territorial scale considering that, in this case, visual communication is based on the codification of narrative languages in order to make users able to fully understand the described reality.

Following the above, an example of territorial enhancement is Vega Park (2016-2017), a research conducted by Lorella Camellina and Antonella Ligios (Iuav Venice and Ca 'Foscari University) based on the mapping of historical sources on Porto Marghera that describe the phases of social and territorial evolution. It is a "dating" operation that allows a narrative rhetoric to be transformed into data, according to the definition of Cukier & Mayer-Schonberger, which sees "datification" as a "quantification and consequent progressive transposition of physical reality into the form of computer data" (Bassi et al, 2018, p.112). The Vega Park project is an interactive application that can be navigated through physical touch-foil support. It allows users to explore the contents through a "tree map" that describes the concerned area, together with the display of data regarding the history and culture of the place, as well as a database of images and information documents.

The strategic use of geo-referenced data has also guided the intuition of Visual Versilia (2013-2018), a research project developed at the e-GEA inter-university center, coordinated by Dr. Martina Giannini (Modena and Reggio Emilia University). The project is based on the creation of a multimedia guide based on the GIS, which is an interactive map that allows navigation in different levels of dialogue divided by themes and chronological sections. This tool contains the mapping and descriptions of the main Versilia's cultural heritage (monuments, archaeological areas, buildings of historical and artistic heritage, etc.), offering historical information from the earliest evidence of human presence in Versilia area, distinguishing the various geographical contexts according to historical periods. Moreover, through an upgrade in the 3D version, Visual Versilia proposes the reconstruction of site transformations over time, through highly immersive technological solutions[9].

Mappings, three-dimensional reconstructions and georeferenced data allow the realization of information systems to communicate the territory in its most recognizable and shared forms. Territory elements, in fact, correspond to real signs, which analyzed and summarized can be used to elaborate a real "symbols' alphabet", a "code" with which it is possible to "rewrite" the territory visually. An example of a "rewriting" of a place is the well-known "è Bologna" (2012), a city branding project curated by the Urban Center Bologna, conceived by Matteo Bartoli and Michele Pastore. "È Bologna" sees the development of an alphabet that replaces individual letters of the abstract signs, designed starting from the "signs" of the city, which are typical and recognizable figures of Bologna city, from the cross to the lily of the banner, to the mosaics, the coats of arms, the walls. The signs, composing themselves on an online platform, alternately with each other and on chromatic basis, give rise to different visual configurations such as to make the story of the city shared and joined (Fig.4).

When we think about the themes of storytelling, we need to know that it is not just about staging, but rather it contains the ability to create visual, textual and sound representations that give life to simulations of reality that become reality itself (F.M. Giuli, 2019)[10]. An example of this operation is "Su ali d'Aquila", an emergency infographic project based on signs designed by Molly & Partners and Utilità Manifesta for the Santa Rufina di Roio (L'Aquila) camp, where the Story Gate found representation in the mental landscape from a situation of confusion (fusion with the reference traumatic situation - the 2009 earthquake, the inner psychological collapse, the surrounding environmental devastation) to one of greater stabilization.

The wayfinding project in Abruzzo is an example of reconstruction intervention in the area with the aim of restoring to the earthquake areas a sense of security, identity, recognizability and presence, at a time when the perception of the territory itself was pervaded by disorientation, danger and high instability. The development of orientation systems within the camp, and on the roads leading to it, has allowed a specific and expressly redesigned directional marks according to the new colors of the place (Fig.4). Another example of the ability of Design to formulate visual languages through the interpretation of the place and history binomial is the project by

Pentagram group, coordinated by Paula Scher, for the city of New York, in particular for the Rockaway Beach in Queens which suffered major damage following the devastation of Hurricane Sandy in 2012.

As in a previous intervention for NYC Beach, in which the Pentagram group had created a new signage system (partly graphic, partly photographic) for access to the beach, the graphic form was also chosen for the Rockaway project. More specifically, typography was chosen as tool for reconstructing the identity of the place. In fact, Scher's project envisages a walkway structured like a typographic strip of about a mile long, on which appears the word "Rockaway" in letters of 100x50 feet, visible also from the top of the planes flying over the area, landing at the nearby JFK international airport.

Each concrete panel of the walkway is used as a pixel in the typeface, based on a font specifically developed by the studio[11] (Fig.4).

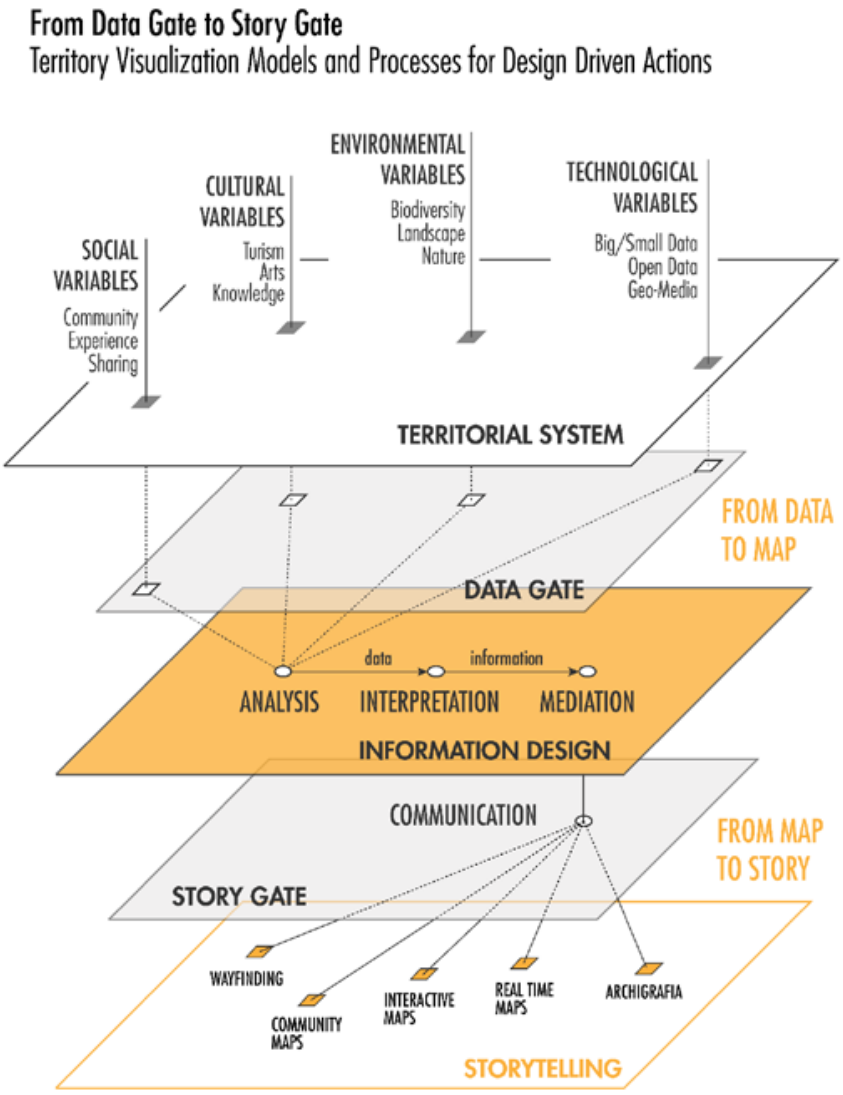
04
From left: "è Bologna" – M. Bartoli, M. Pastore; "Su ali d'Aquila" – Molly & Partners; "Rockaway Beach" – Studio Pentagram

Conclusions

What has been described up to now represents a sort of critical exercise through which it is possible to outline some questions of merit and method to investigate the role that the project of communication can have for the territory in the definition of social and widespread projects. It is an exploration conducted through experiences in which communication is exercised simultaneously in a concrete or rhetorical dimension and is composed through guided visualization processes of Information Design (Fig.5). It is the same visualization that, according to Alberto Cairo, is defined as a visual representation of information addressed to allow communication, analysis, discovery, exploration of what we commonly call "data". Displaying data is also a way to expose them and therefore allow them to be analyzed and studied to make appropriate, and sometimes unexpected, discoveries. But in turn, Cairo goes on, visualization is itself a model: "A model is [...] a set of signs [...] that describes, explains or predicts something, with a degree of variable accuracy [...]. Good models manage to abstract reality while preserving, at the same time, its essence" (Cairo, 2016, p.70).

Consequently, it is useful to investigate those cases in which the "contact" between communicative actions and territory takes place through the use, development and transfiguration of data through the reproduction of the relating languages.

In other words, to observe how the graphic and visual representations on a territorial scale - which include the transposition of information such as to combine narrative plots - require a communicative project that begins in the deepening of specific visual grammars consistent with the object-subject to be communicated. Thus, the cases represented are models to indicate communication not only as cultural mediation and service projects, but as Data Gate: gates to enter the communicative dimension of the territory. An access door is also a way to make design-oriented research get into the territory and integrate it to territorial needs (Castelli, 2005). For this reason, a door is also a way of meaning able to write the scenario of territorial Story Gate and Storytelling and, therefore, "areas of meaning" so that the territory is depicted, with properties and quality, for those who must work on it through community and participatory design activities.



05
"From Data Gate to Story Gate Process. Territory Visualization Models and Processes for Design Driven Actions (authors, 2019)

05

Notes

1. The themes related to Data Gate, Story Gate and Story Telling, have been the subject of research and study within the cycle of interdisciplinary seminars entitled "Communication and representation. From Data Visualization to Infographic "conducted within the Final Synthesis Laboratory in Design of the master's degree in" Design, Visual and Multimedia Communication", of Sapienza University of Rome, A.A. 2018/2019, teachers Vincenzo Cristallo, Ida Cortoni, Maria Grazia Berlangieri, tutor Miriam Mariani.
2. "I find new shapes, new color combinations, new graphic signs – they come to me this way rather than ex nihilo. This is a process of settlement, simplification, mapping and encoding. The reality observed gradually congeals into signs, through the repetition of patterns on the pages. The signs that accumulate in these sequences of observational drawings resemble an abstraction or the development of a language" (Cox, P. From representation to language in Corraini, 2016).
3. From the speech "Phenomenology of Information Design" (Cristallo, V., Mariani, M.) at the XXII National Congress AIV (Italian Association of Evaluation), at IUAV Venice (April 3, 2019), on the theme "The culture of Evaluation: Diffusion and Development ", work table" The Information Design in the evaluation: methods, techniques and languages to communicate the evaluation research ".
4. "Networks are everywhere. It is a structural and organizational model that pervades almost every subject, from genes to power systems, from social communities to transportation routes […]. As an important driving force for understanding the complex connectedness of modern society, network science has innumerous applications in different fields" (Lima, 2011).
5. mappadicomunita.it, 2008

(continue)

6. The technology made it possible to reveal information that was not immediately perceivable by the five senses, indeed even counterintuitive. Today the technologies that allow us to develop a sort of sixth sense and to capture invisible realities have multiplied. They allow to analyze and relatebehavioral data, opening the doors to a new dimension, in addition to the three spatial and temporal dimensions. A fifth dimension essential to transform arid and contextless data into information useful for understanding new personal and social phenomena and behaviors" (Cosenza, 2012).
7. www.mapstory.org
8. www.senseable.mit.edu/livesingapore/
9. www.visualversilia.com
10. Giuli, F. M. | Molly & Partners (2019), "Accessibility of knowledge. Transmit knowledge between visual storytelling and artistic beauty ", 17 April 2019, series of seminars: Inside Design - Information Design. Communication and Representation. From Data Visualization to Infographic ", curated by Vincenzo Cristallo, Ida Cortoni, Maria Grazia Berlangieri, Miriam Mariani, Master's Degree in Design, Visual and Multimedia Communication, Sapienza University of Rome.
11. www.pentagram.com

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