Networks & Local Knowledge: A Language of Mediation to Arrange In a Process of Territorial Intelligence

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Abstract

We are pursuing research in the topic of territorial intelligence area, research undertaken since fifteen years, and concerning its ability to organize the mediation between actors, setting up their networks, and knowledge and expertise that they hold to form what we have referred to as formal territorial capital. This collective capacity, the territorial intelligence, when territory anticipate failures that are going to achieve it, requires the implementation of an evolution of its culture, and in particular the co-construction of territorial knowledge between heterogeneous actors of different culture, present and/or remote (as we mentioned in the above definition), holders of local or expert knowledge, which requires to implement mediation efforts to seek strengthening the capacity of local stakeholders in territories which promote an endogenous development.

Purpose of the Study

Development processes, that will support and promote using of endogenous resources held by heterogeneous actors, and translated by drivers of the development project, to set up the territorial formal capital, require time and skills to access fundamental knowledge of a territory. We must not reject local knowledge mainly because they are local knowledge under the pretext of considering them against expert ones.

Sources of Evidence

Because local knowledge has been offering potential skill that should be incorporated into a territorial development project, since ad'hoc networks were trained. An additional stake, for territorial intelligence process, will be to try restoring the link, main purpose of the territorial intelligence, with the help of mediation, between local knowledge and expert or scientific knowledge, into inter subjectivity;

Main Argument

Solicitation of local knowledge in the territorial planning more generally raises the issue of knowledge and learning. It requires the notion of information to hold a point of view of the reception that is defined as 'a difference that creates a difference in the mind of the one who receives it'.

Information can also be seen from an ecological point of view, i.e. present in nature under the form of latent signs, waiting for translation.

Conclusion

Another possible approach to the relationship between expertise and local knowledge derives from the growing interest in the scientific community for Adaptive co-management of natural resources by experts/technicians with local actors. It is a pragmatic approach to collective learning «way» (learning by doing) combining closely and flexible political iterative manner of development, experiments in local management actions, comments, reflective moments then any adjustments in policy.

Keywords: *knowledge, link, local, mediation, network, territorial intelligence*

Introduction

We proposed the following definition of territorial intelligence (Bertacchini, 2004) "*an informational* and anthropological, regular and continuous process initiated by local actors physically present or remote who appropriate a space resources by mobilizing then transforming the energy of the territorial system in project's ability." As such, the territorial intelligence can be assimilated to territoriality which results from the phenomenon of appropriation of the resources of a territory and then to transfers of responsibilities between local actors from different culture categories. The objective of this approach is to ensure, literally as figuratively, to equip the territorial level to develop what we have named the territorial formal capital."

We had made it to mean that territorial intelligence could act as collective intelligence, and allow territory to define a policy for local development of endogenous nature able to respond to the competitive relationship between territories and calls an evolution of informational posture to another treatment of signals and information.

This collective capacity, the territorial intelligence, when territory anticipate failures that are going to achieve it, requires the implementation of an evolution of its culture, and in particular the co-construction of territorial knowledge between heterogeneous actors of different culture, present and/or remote (as we mentioned in the above definition), holders of local or expert knowledge, which requires to implement mediation efforts to seek strengthening the capacity of local stakeholders in territories which promote an endogenous development.

Development processes, that will support and promote the use of endogenous resources held by actors heterogeneous, and translated by drivers of the development project, to form the territorial formal capital, require time and skills to access fundamental knowledge of a territory. We must not, under the pretext of as them local knowledge, against expert knowledge, but they offer an additional challenge for the process of territorial intelligence to assume reestablish the link by mediation between them.

We will look at the ability of mediation of territorial intelligence to connect local knowledge with established networks and for this we will successively discuss the following points.

1. The assumptions of territorial grammar and evolution of informational posture to another treatment of signals and information.
2. Inter communication between local and expert knowledge
3. Characterization of local knowledge and their articulation with expert knowledge: some elements of characterization of local knowledge.

1. The Assumptions of The Territorial Grammar

The territorial intelligence, this informational process, as well as anthropological, assumes the conjunction of three hypotheses (Bertacchini, 2004):

- The actors exchange information (individual and/or collective energy generation);
- They give credit to received information (uptake-information exchange);
- The communication process thus established, stakeholders establish relevant networks and transfer their skills (mobilization and transfer of energy: project formulation).

We believe that it is preamble to the definition of a policy for local development of endogenous nature able to respond to the competitive between the territories report and targets more sustainability.
This is an evolution of informational posture to another treatment of signals and information.

1.1 An evolution of informational posture to a different treatment of signals and information

This collective of the territory, the territorial intelligence capacity to anticipate failures that are going to achieve it, requires the implementation of a development of its culture.

Everything is matter of sense. At the level of the action of the object and the identity acquired by territorial actor; it is a paradigm of meaning and identity (Herbaux 2007). Thus, territorial Dynamics derives its existence from the complexity of its networks in the social debate and energy implementation allows evolving a new territorial object. The endogenous territorial innovation feeds signals internal and external information flows. It is to capture data streams to process continuously to detect in time the threat and possibly to seize the opportunity. The term actor, by the shared resource, makes so sense. The co-construction of territorial knowledge between heterogeneous actors of different culture, present and/or remote, holders of knowledge and/or experts, requires implementing mediation efforts aimed at strengthening the capacity of local actors to territories which promote an endogenous development.

The establishment or the re-establishment of links by the mediation between local knowledge and expert knowledge assumed to also answer the fundamental question marked by Latour "*how to follow the associations again*? " [Latour, 2010, p.7] in order to describe and identify the framework in which we have now to identify and then to decipher emerging and association actions.

"*If we want to maintain commensurability between the traces left by frames of reference traveling with speeds and too different accelerations, it is at this time need to operate a 'relativistic revolution*." (Op. cit., p.20, *extract of*)

But, as Foucault [Foucault, 2004], pointed out the expert coding situations (here land) is a procedure of rarefaction of the meaning. The fact that contemporary knowledge is more and more burst of multiple detuned expert knowledge of common sense raises the question of its extension which, from our point of view, is less a deprivation as a translation. Morel rightly denounces the poverty of this extension by providing the following explanation [Morel, 2007, pp. 172-173]:

'the predominance of descriptive extension compared the explanatory extension is largely due to the difficulty even to find explanations. (…) *The poverty of the explanatory extension has originates a scientific problem: to popularize, need access to fundamental knowledge and experts, and this is not so easy. Extension is not only a translator; it must also, somehow, be a researcher. Which leads to the corollary that explanation to popularize research requires time and expertise* i.e. cost. »

The process of development to support and promote using of endogenous resources held by multiple local players, and translated by the drivers of the development project, to set up the territorial formal capital, require time and skills for access to the fundamental knowledge of a territory. We must not, under the pretext of as them local knowledge, against expert knowledge but they offer an additional challenge for territorial intelligence processes, that suggest reinstate the link between them through mediation (Bertacchini, 2012).

2. Inter Communication Between Local Knowledge And Experts

Local knowledge therefore has a central role to play, in order to reconcile objectives of Science, societal issues and sustainable development. The underlying assumption is to articulate the overall scales mobilized in understanding of sustainable development with local knowledge capable of fine and continuous observations systems. It comes to be able to follow signals emitted by the environment after having identified those who were relevant to or on contrary does not hold.

For this, we must first clarify what are the kind of expertise mobilized in the decision and the territorial public action.

2.1 The Kind of Expertise Mobilized Into the Decision and the Territorial Public Action

The current model is a virtual monopoly of production data and analysis by the technical body of the State and its agencies, particularly those of economists statisticians [Barthélemy, 2010]. It deprives other types of expertise (single or multidisciplinary expertise in the academic world, expertise in local and regional authorities, associations and professional bodies, civic expertise, local knowledge) yet necessary for the emergence of territorial intelligence [Maurel, 2012.a] process.

But this situation is going to change due to the development in Europe and in France of environmental policies that encourage them to rely with the observations made by the naturalistic associations and ordinary citizens. The percolation of this environmental dimension in all public policies, as integrator of sustainable development, is that the solicitation of local knowledge in territorial planning is likely to increase in the years to come with some precautions that we include. An additional issue in the process of territorial intelligence is therefore (re) seek to reestablish the link by the mediation between local knowledge and expert knowledge to restore in inter subjectivity, a shared sense at the description and interpretation of complex situations [Volckrick, 2000].

However, one of the risks of derivative of quantization of local knowledge is their uptake by national or international groups for broadcasts to these larger scales in order to conquer new markets or to serve interests opposed to those of the holders of such knowledge. The underlying mechanism has been described by Polanyi: '*Expression of the implied is in relation to geographical proximity. Its dispersion is linked to the gradual codification of unformulated knowledge which gradually climbs it into explicit knowledge* "[Polanyi, 1983, cited by Harrington, 2007]."

2.2 An ecological public policy context that questions the information concept

Solicitation of local knowledge in territorial planning more generally raises the issue of knowledge and learning. It requires the notion of information to hold a point of view of the reception that is defined as '*a difference' that creates a difference in the mind of the one who receives it* [Bateson, 1972]. Information can also be seen from an '*ecological*' point of view, present in nature under the form of latent signs, waiting for translation.

This information design seems particularly appropriate in a context of ecological public policies, to give importance to local actors able to capture the signs provided by nature to develop in a process of territorial intelligence.

This then leads us to question first of all the place of knowledge in territorial decision-making processes and the underlying models of rationality, then evolution of the model of expertise and progressive recognition of local knowledge which suppose to pass the tests of legitimization [Agrawal, 2002]. Theories of learning by action within the organizations highlight a model at three levels [Bateson, 1972]; [Argyris, 1978], the first is to apply the problem already controlled routine solutions, the second relates to a change in frames of reference, standards and values mobilized to address problems situations, the third one door on the frame itself of learning within the organization.

Mobilized and generated knowledge can be explicit, but also implied, that is to say non-codified, not formalized. The model of the spiral of Nonaka and Takeuchi [Nonaka & Takeuchi 1995] can be used to show dynamics of knowledge creation by phases of outsourcing of tacit knowledge and internalization of explicit knowledge in connection with the development of skills, rules and routines of work, whether at individual or collective level. These different levels of learning are at work in the process of emergence and empowerment of a territory and are supported by a set of socio-technical devices of information and communication. However, there are brakes learning covered by individual, social, technical, cognitive and organizational factors.

2.3 A Final Observation: a Non Recognition of Local Knowledge in the Development of The Territorial Project

In his thesis, which gives a central place to the sense, through data, signs and spatial representations in the development of a municipal development project, Maurel (Op.Cit) studied several accessible methodological guides and notes that bureaucratic and professional models dominate the division of tasks is pronounced, the procedures remain heavy, highly supervised, and lead to a rich documentation (type knowledge explicit and collective)without that is certain so far that they have internalized (embrained or embodied) by participants. The co-construction of territorial knowledge between heterogeneous actors and emphasis on local knowledge are not discussed, revealing that expertise and continuous technical rationality model to guide the content of methodological guides on yet, consultation and participation.

In the case of developing countries, other reasons can be advanced to explain this situation. First of all, lack of reliable public data at local scales requires developers to rely much more on local knowledge. The lack of formalization of knowledge brings closer them to the category of 'tacit knowledge' Nonaka and Takeuchi [Nonaka & Takeuchi, 1995] and forced to implement original approaches to mediation with local populations to outsource and formalize this knowledge. In addition, inadequacies of the territorial public administrations of these countries to impose effective instruments of control in management of resources lead endogenous development proponents to seek to strengthen capacity of local actors (show the concept of "empowerment" very present in the scientific literature). The objective is to attempt to rebalance relations of force screw of private, national or international operators and to invent or improve regulatory mechanisms between local groups with divergent interests. The strengthening of independence and legitimacy of local communities in relation to external actors figure explicitly among the features attributed to spatial representations and the underlying technologies (GIS, GPS, cartoWeb).

3. Characterization of Traditional Knowledge and Their Articulation with Knowledge Experts

In the new configurations of territorial planning and other forms of knowledge that those held by experts are regularly cited and more mobilized. It still speaks 'local knowledge', 'lay knowledge', 'citizens' knowledge' or 'knowledge to use'. They can also identify the cognitive component of social representations that Jodelet describes as "knowledge of common sense", of ' naive ' or 'natural knowledge' [Jodelet, 1989]. This knowledge is rarely formalized contrary to the explicit knowledge and outside category of tacit knowledge [Polanyi, 1983].

An attempt to clarify these concepts which constitute a major challenge in a perspective of territorial intelligence, we leave an analysis of the different forms of local knowledge which was carried out by Sintomer in the wider field of participatory democracy [Sintomer, 2008] (i.e.table 1).

Table 1: Categorization of citizens' knowledge

Reason ordinary	**Citizen Expertise**	**Namely political**
Knowledge to use	Observational data	Civic Culture
Common sense	Know professional diffuse	Political citizen
Manual practical sense	Expertise through delegation	Second opinion

3.1. Accessible Knowledge to Everyone: The Knowledge of Use and Common Sense

Knowledge known as relevant of the 'ordinary reason' is this that company considers be accessible to everyone, with a distinction made between "knowledge of use" and "common sense. "

In a liberal vision of democracy in which goods and private interests are recognized, the actors of territory are considered to be users who know their interests and are able to express them, thus allowing adapting public policy to the needs expressed. Participatory devices are then put in place to promote the expression of these needs and interests and putting them into negotiating the compendium of knowledge can go through investigations, surveys, panels of users or more interactive devices between technicians and actors to achieve a progressive co-construction of the needs.

Based on proximity (localized and partial knowledge sometimes sociological and geographic proximity between users, technicians and politicians), they can be easily recognized and accepted by the powers. Indeed, the fact that they are localized, sector, often formalized, scattered, does not allow users qualify mount in generality and contribute questions at scales greater than or more integrated. The localism of knowledge restricts the user in a social role of defense of its interests, or those of his group, and disqualifies it in the arena who claims the research of general interest or the common good in relying on knowledge systematized specialists. The role of representative of users attributed authority to a person into some features of participation (for example the local Commission of the water in a *Sage*) is another factor of disqualification for play other roles (through the associated knowledge) in which this person would be able to engage.

Common sense is by his side at a regular faculty of judgment, reasoning. This form of knowledge is mobilized in deliberative devices such as citizen juries and consensus conferences: citizens drawn give an opinion on questions which do not necessarily concern.

This assumes sufficient prior information, or even contradictory pluralistic debate and most personal reflective moments to be able to express a personal opinion. The manual practical sense is to make individuals, specific manual skills knowledge. It is widely mobilized in associative volunteering or donation individually.

3.2 Articulation Between Local Knowledge and Scientific Knowledge

The articulation between local knowledge and scientific or expert knowledge, in a process of territorial intelligence, seems appropriate even if the most common tendency is to seek the "scientization" of local knowledge to use an expression of Agrawal [Agrawal, 2002], that is, to apply the scientific process as it is practiced in Western culture. In relying on numerous international examples, this author thus identifies three generic steps in the process database of local knowledge: particularization (distinguish useful local knowledge of those considered unnecessary), validation (using scientific criteria to test and analyze it) and finally the generalization (cataloguing, archiving and dissemination). This “scientization” in three stages allows local knowledge retained access to the rank of 'facts', at least in the eyes of a company that has delegated its expertise to the scientific community. However, this approach presents limits of various levels, including loss of details of the context of production and application of local knowledge, while they are specifically built on an empirical, progressive and systemic belonging ecosystem understanding [Roué, 2003].

Conclusion. For the construction of the formal territorial capital and its ability to mediate: taking account of the relationship between expertise and local knowledge

For beginning we recalled in the introduction the definition of territorial intelligence that we propose in 2004 "*an informational and anthropological, regular and continuous process initiated by local actors physically present or remote that appropriate resources of a space by mobilizing and transforming the energy of the territorial system in project's ability*.../.. ».

From an informational and anthropological point of view, we already ask of heterogeneous actors and networks of knowledge at the heart of the territorial development and territorial intelligence as a collective intelligence to promote endogenous and sustainable development. We did echo the proposal of Moles [Moles, 1995, p25] when he wrote his proposal of "*ecology of communication or communication is defined as the action to involve a body or system located at a point given R to stimuli and the experiences of the environment to another individual or system located in another place and another time E.using the knowledge they have in common.* " and or the ecology of the communication will be *'the science of relations and interactions between the different species of communication activities*.../.. "[Op.Cit, p94]

But developments since the territories to know, the strengthening of territorial with the imbalances inherent competition, distance increased and noted citizens with democratic and scientific bodies, the fall in State services and contraction unprecedented financial means invite us to pay greater attention to knowledge and knowledge held by actors far strong deposits little considered local knowledge, to form what we mean by formal territorial capital, as well as their articulation with the expertise. This is couple and organizes local knowledge and networks (Bertacchini, 2013).

Another possible approach to the relationship between expertise and local knowledge derives from the growing interest in the scientific community for Adaptive co-management of natural resources by experts/technicians with local actors [Walters, 1986]. It is a pragmatic approach to collective learning «way» (learning by doing) combining closely and flexible political iterative manner of development, experiments in local management actions, comments, reflective moments then any adjustments in policy.

On the side of the scientific community, the issue is to pass a mode of knowledge transfer based on the model communication 'transceiver' Shannon, to co-construction of knowledge having devices sense for local action [Roué, 2006]. But the establishment or restoration of links by the mediation between local knowledge and expert knowledge guess will also answer the fundamental question posed by Latour "*how to follow the associations again*?" [Latour, 2010, p.7]

The social and participatory dimension becomes fundamental in these approaches. Local knowledge here is taken seriously in the same way as traditional expertise in their ability to feed the signs and signals to change the informational posture of the territory and to try to reconnect the link on the one hand, with the scientific community and, on the other hand, with territorial bodies of governance and decision. [Scientists consider that these local knowledge have certain qualities that help them to better understand the natural environment or ecological species [Moles, 2004], quoted by [Barthélemy, 2005], p. 5].

Local actors exploit times of local history to interpret the signs they receive; finally, their local anchor gives them a fine knowledge of the places. Successful experiences of combination between indigenous knowledge and scientific knowledge in natural resources management plans have been highlighted [Hall et al, 2009], [Maurel, 2012].

We see it, an additional issue in the process of territorial intelligence, aimed at the formation of formal territorial capital is therefore to seek to restore the link, mediated by the extension in the sense of Morel [Morel, 07], between local knowledge and the knowledge of experts in order to restore a shared sense the description and interpretation of complex situations in inter subjectivity.

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