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The engaging process as a means to achieve socio-ecological transition

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Summary: The objective of the present paper is to propose a TI theoretical and methodological framework encapsulated in the sciences of communication and information. This framework is applied to the case of water management by enlarging the concept of public utilities to that of a collective management of the water cycle in a large agglomeration.

The methodology is based on several steps that are going to be tested in a research project under vetting procedure. The prominent steps are:

- Establishing an exhaustive list of stakeholders
- Understanding stakeholders' interests and professional problems
- Designing experimental web 2.0-based cooperative devices
- Giving impulsion to the stakeholders' engagement
- Evaluating the overall effectiveness

The conclusion will question the conditions of generalization of that experiment.

Résumé : L'objectif du présent document est de proposer un cadre théorique et méthodologique en intelligence territoriale pour résoudre des problèmes de transition soci-écologique par référence aux sciences de la communication et l'information. Ce cadre est appliqué au cas de la gestion de l'eau en élargissant la notion de services publics à celle d'une gestion collective du cycle de l'eau dans une grande agglomération.

La méthodologie est basée sur plusieurs étapes qui vont être testées dans un projet de recherche en cours d'évaluation. Les étapes importantes sont:

- Établir une liste exhaustive des parties prenantes
- Comprendre les intérêts des parties prenantes et des professionnels
- Concevoir un dispositif coopératif web2.0 expérimental
- Donner l'impulsion à l'engagement des parties prenantes
- Evaluer l'efficacité globale

La conclusion envisagera les conditions de généralisation de cette expérience.

Keywords: territorial intelligence, participation, engagement, top-down approach, bottom-up approach.

Mots clés : intelligence territoriale, participation, engagement, approche descendante, approche ascendante.

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I. Introduction: top-down vs. bottom up approaches

Classically, Territorial Intelligence has been viewed either as a “top-down” approach to promoting the values of a territory or a “bottom-up” approach (Dumas, 2007, Pélissier & Pybourdin, 2009). The stance we are defending is that neither one of these approaches alone can produce an “intelligent” behavior of the territorial actors. We have to recognize that both approaches are necessary, especially in order to arbitrate between individual vs. collective interests, between local vs. national, between short vs. long term outcomes of the decision that are made. They are intertwined in a dialectical process out of which intelligence emerges.

The objective of this communication is to emphasize one aspect of that dialectical process: the engagement of the actors in an intelligent territorial approach. Our main hypothesis is that voluntary commitment (Bernard, 2006; Duvernay, 2005) of stakeholders within a collective action allows improving the effectiveness of that action. The engaging process is one of the means to enact territorial intelligence approach in the field. Following Girardot, 2004, we consider that territorial intelligence implies “sustainable development ethics that enhance three principles: the involvement, an overall and well-balanced approach of territories and the partnership”. Consequently, we infer that engaging processes and actor networking should be prominently invoked to build up a methodology of action.

The paper is organized in 5 parts. After sketching out top down vs. bottom up approaches, we integrate them in a dialectical perspective. We apply to that model some of the rules that “push a territory to be intelligent”. We deduce that engagement of the stakeholders is a key factor to achieve the socio-ecological transition. Finally we present a planning of action that is under review, but can be taken as a basis for concrete TI projects.

II. The convergence of top down and bottom up approaches.

There are two opposite approaches for territorial intelligence: the downward –or top down- and the upward –or bottom up- ones. In the first case, the decentralized policies and rules are imposed to the territory while, in the second case, territory is considered as an emergent concept of local governance in sustainable and fair development context (for example municipalities in Dumas, 2007).

The top down approach is generally taken in a management view of territorial governance. It comes from the concept of competitive intelligence and strategic analysis. It is an essentially rationalistic approach where general objectives are decomposed into more specific ones in a hierarchical design from the top to the bottom. It is the way national planning is transformed into regional, then urban, then local planning. The discourse, which goes along that descending planning, can be summarized in the cartoon of Figure 1. The popularity of that cartoon indicates that the top down attitude is largely spread and humoristically despised.



Figure 1 : A popular view of top down local management¹

At the other end of the top-bottom relationship is the bottom up approach. It is an upward approach local actors are at the root of the process. It provides a vision of the territory as an enhancement space of local resources. These are built in accordance with an endogenous logic and favor the sharing of information in accordance with a cooperative logic (Pybourdin, 2008). Their popular connotation is that of participation and a form of direct democracy as shown by Figure 2.

¹ www.dinf.ne.jp/.../dwe002g/dwe002g04701.gif



Figure 2 : The same actors in a bottom up attitude

These cartoons are extracted from a site² that is devoted to help disabled children and provide them with advices as to build up their territory. If we consider carefully the cartoon **Figure 2**, we see that the gentlemen and the lady who previously were dictating rules of how to behave are now in a position of equality and ready to hear what actors are saying. This is the essence of a dialectics between, say, basic people and experts or those who know the legal, economic or political context.

It is those complementarities which allow the implementation of the key factors of Territorial Intelligence that have been defined by Dumas, Girardot and Masselot in their training programs³. They list as key factors: understanding the context, knowing the situation, self-knowledge (of people and territory), exchanging in confidence, protecting, sharing, and acting. To succeed in building up the trust that is conditioning a real transition to any other state of the world, we have to devise a methodology of engagement based on the information and communication processes at the bottom level.

III. The dialectics of bottom up and top down is nesting the socio ecological change

Castells (1999) declares that collective and concerted action in network and collaborative work are nowadays based on a model of social cooperation built on a network society, the computer science and the Internet. Pybourdin and Duvernay (2009) note, "The stake of networks is to favor synergies of cooperation between heterogeneous actors belonging to distinct cultures and groups that are more or less rooted in the territory. These communities of practices (Wenger, 1998) represent some groups of people sharing a same hobby and/or the same problematic. They increase and enrich their knowledge. They regularly survey interaction. Their main characteristic is a strong link between all their members. These strong links are essential to the diffusion of complex and non-codified knowledge, which require many direct and recurrent interactions. In return, these interactions are structuring confidence relationships that allow to validate some information without first validating the informants."

This is related to our key factors inasmuch as socio ecological change implies complex relation

² <http://www.dinf.ne.jp/doc/english/global/david/dwe002/dwe00247.html>

³ Hands out in process of publication.

between local and global, between people, between people and technology that a top down approach cannot solve. The authors name all that process as bridging the interpersonal gap by sharing representation and feeling of territorial membership. In order for local actors to think their link to their territory as coming from an integration of a local, progressive, feeling, it is necessary to make a local public space. That common symbolic space has to emerge so as everyone feels responsible enough to engage oneself on a shared project (Bertacchini, 2004). In the top down territorial intelligence framework, they have to invent new ways of citizenship and new possibilities to act all together at a local governance service. As a result, a learning territory is simultaneously emerging offering a special place to any citizen in a "local orchestra" (Herbaux, 2007).

IV. Engagement as one means to play the partition

Social psychologists have developed the theory of engagement in response to the limits of theory persuasive informing, which produces little impact on behavior change, as could demonstrate researches to prevent tobacco use and drug use among American teenagers (Peterson et al., 2000, Dukes et al., 1996). Following Lewin, Joule and Beauvois (2002) have shown that it is not the individual who engages him/herself according to his/her personological characteristics, but the situation that engages (more or less) the individual depending on its objective characteristics. "*The engagement of an individual in an act matches the degree to which he/she may be assimilated to the act*" (Joule and Beauvois, 2002).

In this perspective, in order to be engaging, an act must meet a number of characteristics:

- The context of freedom in which the act is performed*: an act done in the context of freedom is more engaging than an act done in a context of constraint.
- The public nature of the act*: an act done publicly is more engaging than an act whose anonymity is guaranteed.
- The explicitness of the act*: an explicit act is more engaging than an ambiguous act.
- The irrevocability of the act*: an irrevocable act is more engaging than a revocable act.
- The repetition of the act*: an act that is repeated is more engaging than an act performed once.
- The consequences of the act*: an act is all the more engaging so as it is heavy with consequences.
- The cost of the act*: an act is all the more engaging so as it is costly (in money, time, energy, etc.).
- The reasons for the act*: an act is all the more engaging so as it can be attributed to internal reasons and cannot be attributed to external reasons.

Numerous action-researches have been conducted either in the domain of eco-citizenship (Joule & Bernard, 2004) or for pedagogical purposes in the areas of technology and management (for example, mentoring, coaching, peer-networking, after Christopher Rhodes, Michael Stokes, Geoff Hampton, 2004).

According to *Ossad* (1990) terminology, we prefer to use the term "stakeholder" rather than "actor" to designate the individuals that are going to be engaged, since we are dealing with roles rather than persons. The stakeholder issue is a consistent debate in Territorial Intelligence that we do not address here.

V. A proposal for setting up the engaging process

Taking in account the potential of engagement theory to drive individuals into a territorial intelligence approach of socio-ecological transition, we have developed a five-step protocol that can be implemented in the following way. We base our example on a local project of managing the water resource in the perimeter of a urban water basin. The objective of the project is to make citizen conscious that they are at the same time users of water, polluters of the water, and prescribers for the public utilities who manage the water system, also called *The Great Water Cycle*.

1. Establishing an exhaustive list of stakeholders

- Standard users: general public of all ages (from children to the retired person)
- Industrial users in all sectors of activity also consumer and polluter prescriber vis-à-vis the great water cycle
- Industrial user specialized in routing and processing freshwater (e.g. Veolia)
- Local and regional authorities: mayors, council, regional council, urban community (Toulon Provence Méditerranée-Tpm)
- Experts: the cluster *Mer Paca*

-Associations of Environmental Protection
-Private laboratories (e.g., Paul Ricard Oceanographic Institute on the Embiez island)
-Research laboratories in biology and current patterns (Proteus, Lseet, University of Sud Toulon-Var)
-Research laboratories in the social sciences (I3m project director, specializing in Information Sciences and Communication; Babel on the study of identities)

2. Understanding stakeholders' interests and professional problems

In summary the stakeholders' interest are determined by in-depth interviews with a sample of them. Inferring it from previous discussion, we propose to treat the topic of eco-citizenship using two communication situations of crisis staged by a video movie based on a viral mechanism. A first crisis will be linked to effluent discharge during high rainfall climatic episode (pipe overflows and discharge of effluent into the sea water may have an impact on the quality of bathing water). The second crisis will show the impact of pollution of seawater on marine biodiversity (fauna and flora).

3. Designing experimental web 2.0-based cooperative devices: viral communication

Viral communication relies on the biological metaphor of "virus". With the explosion of the communications capabilities of the Internet (forum, blog, share video, photos, text content, etc.), marketers of the largest industrial consumer business are increasingly using viral communication. The main characteristic of the virus that gave its name to this form of communication is that starting from infection of a small group of people, the virus then spreads rapidly and widely. Similarly, viral communication is to send a message to a small group of people handpicked, which are considered as referents, opinion leaders within the community linked by a common interest or concern. The message must be so formulated as the opinion leaders should be encouraged to disseminate it widely in their social networks (friends, professional, etc.). In exchange, they must receive a fee for this action (gift, gratuity, social recognition...). The practice showed that there are three main themes of messages that may have this viral nature: eco-citizen, humanitarian, and humorous offbeat. The "recruitment" of these referents is done via the Internet: they are active members within community networking such as forum, blog, and creator of personal web sites with large audience.

The importance of viral communication for us is to recruit a population of local referents –among stakeholders- focused on our object of study. They will involve social networking, the basis of bottom up process.

4. Giving impulsion to the stakeholders' engagement

Several actions will take place to impulse the engagement. Several videos will be created to simulate a communitarian water crisis, such as pollution of rivers after strong storms or banishment of sea bathing after ecological drama.

1 - targeting opinion leaders on forums and blog covering local ecocitizen issues of water, protection of Mediterranean marine biodiversity, and tourism resort in the Var.

2 - sending an email with a link to download the first viral video (crisis communication) on the website made by the team contributing I3M.

3 - video downloading comes with a message urging the opinion leader to register online with a group of friends to come and participate in an actual event held on a site linked with the theme of video.

4 - welcoming public on a place to meet with various water stakeholders (institutional, political, industrial, etc.). The aim of the event is the implementation of interpersonal communication for educational purposes.

5 - In addition, before and after the event, this target is invited to participate in various discussions and content on the website contributory moderated by the project partners (TPM, industrialists, etc.).

6 - The remuneration of opinion leaders for agreeing to "play the game" of viral communication, is to be invited in a privileged way to attend a three-dimensional simulation on the website Second Life. Mediated by avatars, each participant watches the crisis proposed in the viral video synchronously, in real time. He is invited to deploy practices and behaviors related to the proposed educational communication in "real" event.

7 - Tracks of discussions and feedback from this experiment are to be conducted on the contributory website.

These manifold proposals aim to strengthen the pluralistic commitment by allowing the parties involved a triple identification of action (Vallacher and Wegner, 1985), i.e.:

1 / covering a larger behavioral area;

- 2 / bearing higher social value;
- 3 / offering a greater potential for self-definition.

5 - Evaluating the overall effectiveness

A battery of indicators has been devised to monitor the experiment. They are both quantitative and qualitative:

- *Quantitative indicators:*
 - Number of Internet users downloading the video viral
 - Visitor's identity via IP address
 - Origin of visitors
 - Number of additional visitors to the contributory website 2.0
 - Navigation intra site
 - Internet email addresses
- *Qualitative indicators:*
 - Analysis of comments left on the site, blog, forum on the discursive mytho-ritual register. The methodology will be a crosstab from the method of comprehensive interviews and content analysis using software such as Alceste.
 - Semiotic analysis of content-type photography, video, animation offered and shared by users

The idea is to measure the degree of involvement of stakeholders. The effects of engagement are the stronger the higher engagement level is on both, cognitive and behavioral dimensions.

- *cognitively, engaging in a particular act leads*
 - to consolidation of attitude;
 - to attitude change (rationalization).
- *behaviorally, commitment to a particular act leads:*
 - to stabilization of the act performed;
 - to achievement of new behaviors along the same lines.

Conclusion

Through this contribution, we wanted to approach the engagement of stakeholders in order to develop a sort of "culture" of social and environmental responsibility. The application used here deals with an integrated coastal –i.e. local- management of the great cycle of water. We recall that we're at the stage of proposing the empirical study, therefore we are not able to present results. Such an approach to the research-action involves the formation of ad hoc organizational forms like networks. Those networks stem around and from the mediation of various ancillary devices, to allow the passage of individual engagement to collective engagement, though the process of translation (Latour, 1989).

At the heart of these hybrid networks, we prefer and recommend practices of communication as participatory as possible. This is to persuade, involve, to enlist all types of stakeholders, by helping to identify a common convergent goal, whatever the divergence of interests that seem to separate them at the beginning. These communication practices will encourage them to produce, through translation, engaging discourses (Duvernay, 2005). By performing engaging acts that take different forms of communication (meetings, production of posters, miscellaneous documents, comments, etc.), the link is established between each individual and its community.

The conclusion is that one must work on the link between rhetoric and actions, bringing forth a sense of common act (Boutaud, 1998), in a dialectical behavioral and semiotics approach. The act must be integrated by each stakeholder, in order to change his/her representations and to convince him/her to engage as he/she is and does, beyond the performance of routine acts.

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With a blending of scientific and literary cultures, Philippe Dumas has promoted in France several university courses based on multiple abilities: Technical institutes « IUT » for commerce in 1970 and for Internet design and applications in 1990. Philippe Dumas has always tried to start out of concrete human activities to place behavior in perspective. ICT's are the latest anchor of this interest in human dimensions of technology: psychosocial, historical, ethical.

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