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A. Richard Ferroudji, Olivier Barreteau

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Concert'Eau: a setting to experiment difficulties of pluralisms

Audrey Richard-Ferroudji
Cemagref UMR G-EAU and EHESS Paris

Olivier Barreteau
Cemagref UMR G-EAU
Olivier.barreteau@cemagref.fr

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Abstract:

In the environmental field, water management provides examples of the move towards participative democracy. Indeed, French water policy promotes participative river basin management devices. Such devices allow confrontation of several relationship with water and raise the issue of composing these diversity within decision making process. How to compose diverse cultural viewpoints, water uses objectives and people attachment to environment?

We have designed a setting of experimental sociology to allow a group of people to experience this difficulty in composing with a variety of viewpoints. It takes the form of simulation game, Concert'eau, in which players have to embody principles of justification and face events in shared virtual river basin. First experiments have shown that the same patterns due to this pluralism emerge from the gaming session as from real situations of dialogue.

1. Introduction

Situations of spatial planning or natural resources management have to mix a diversity of viewpoints and objectives on a territory. With the current trend of participatory policy making, developing the necessity for an increasing involvement of citizens, and "stakeholders", this diversity is more and more dealt with in interactive setting, instead of old-fashioned top-down integration. Participatory settings are then flourishing: concerned people are called upon in policy processes, with a lot of investments in time, cognition and money to organize them or to participate.

This leads to several deceptive situations: feeling of manipulation, weak outcomes, etc. We assume that this is among other causes due to the fact that organizers and participants to these processes do not consider seriously enough the difficulty of coping with a diversity of people, all of them coming with their full relation to the system at stake, including their experience, their networks, their values and their feelings.

In this paper we propose a simulation game, Concert'eau, aiming at raising the awareness on this difficulty through experimenting it¹. In a first section, we go deeper in the reason for this difficulty to cope with diversity. This is explained through the example of a river basin in the South of France, which is at the origin of this work and has been used to design the game. In a second section we present the game Concert'eau, and its specificities within the family of

¹ This communication is based on a part of PhD work of Audrey Richard-Ferroudji, which is in finalisation stage. The tool Concert'eau has been designed specifically for this PhD work.

simulation games used for Natural Resources Management issues. The third section is then dedicated to discussion of game outcomes in relation with real situations of participatory water management.

2. A river basin management dialogue process: a place of multiple diversities

2.1 Towards a dialogue process in the Lentilla and Llech basins

The Lentilla and the Llech are two Mediterranean rivers in the south of France, 30 km west of the city of Perpignan. In this place, the predominance of agricultural water uses is questioned by environmental issues and the development of recreational water uses. Sharing water is at stake. The existing political modalities of management are of community type and lean on interpersonal arrangements. Based on strong social links, they have proved efficient. But today they reach some limits as they are required to integrate new people affected with certain water issues. As a consequence, some of these people (“neo-rurals” and the French water agency) ask for public debates and the development of formal devices (management plans, rules and regulations, contracts, standards...) in order to guarantee the integration of their “good” (including stakes and moral principles) (Riaux & Richard-Ferroudji, 2006).

This raises several practical questions when one wants to put it in practice cautiously:

- Limits of the public concerned,
- Setting of the agenda,
- Insuring understanding in exchanges as well as symmetry in possibility of intervention.

We focus in this paper in raising the awareness on the last question, even though the two others are far from being solved.

In the Lentilla and Llech, people who feel concerned can be described as farmers, professional of tourist sector, pensioner from Northern Europe seeking the sun, ecologists, fishermen, “pendular” urban workers, etc. Of course these categories are not completely exclusive and there is diversity within each category. However these can also be described as children of the place or newcomers; or also according to their attitude in conflict arising as seeking compromise, or asking for a vote, or champion of the public good or of a certain idea of their territory. For some of them, their family did lost land when a dam was built down the Lentilla valley, while others benefit from this facility today.

If you go there and discuss with them about the basin, you’ll have as diverse answers as:

- “We need water to irrigate our orchards”
- “There should be kept enough water in the river with the suitable quality for trout to live”
- “Water is first an economic good which use has to be optimised”
- “The river is our heritage”
- “You can’t know what it means to get one’s house flooded”
- “I’ve grown up here, and got my first flirt while bathing there”

When all these people come into a participatory setting, unless a huge work is done to lead them to share knowledge and representations, it is likely they won’t understand the same when speaking about the river or the landscape.

Moreover implicit hierarchies are given according to the use of water or the duration of presence in the area. When involved in a given discussion group, these hierarchies will influence the legitimacy granted to one participant in the discussion.

2.2 "Régimes d'engagement" a model of this diversity

River basin management devices propose different spaces for collective debates such as advisory committees or river basin committees. Those spaces can be described as "Hybrid fora". "Hybrid fora" are major deliberating mechanisms to manage controversies over scientific and technological innovations (Michel Callon, Lascoumes, & Barthes, 2001). According to these authors, a hybrid forum must be a space where those taking part can explore options and learn together, a process in which the identity of participants may change or be built up over time. Popular knowledge would not be discredited and considered illegitimate but, on the contrary, respected and taken into consideration. It aims to free up and open the debate between all parties affected (including scientists, industrial corporations, institutions, associations, and the public), such that all opinions can be heard and respected.

This diversity in the relationship of human beings to a common system is thoroughly analysed and described in Thévenot's framework of "regime of engagement" (L. Thévenot, 2006). This author analyses people's shifts between different "pragmatic regimes of engagement" and moral treatments of their attachments to the material world. He pays attention to the familiar engagement with surroundings which is wrecked through processes of making things public. This framework of analysis links cognition and action. It aims "at accounting not only for the movements of an actor but also for the way his or her environment responds to him or her and the ways that he or she reacts to these responses". Three regimes are identified: "familiarity", "regular planned action" and "justification".

In regime of "justification" (Boltanski & Thévenot, 1999), people confront many ways of "describing" people while relying on various forms of conventional information. Boltanski and Thévenot identify "orders of worth" which constitute "common forms of public evaluation and which are grounded on the same grammar of the common good". For example, Thévenot (2000) studies a road and tunnel project controversy and describes the plurality of "worthy roads". The road can be described as "a highway of market worth" which is opening landlocked areas to market competition. The project can also be justified because it is efficient infrastructure. The road can also be seen as a customary way of integrating locals or a route of worthy renown. But opponents can argue that it is an environmental scar. In other places, actors would justify their claim for market reasons. This regime of engagement relies on participants' moral capacities. This regime of justification leads to a first definition of composition of plurality as defining which arguments are considered to be more legitimate.

In a pragmatic regime of "regular planned action", people enter discussions to defend their stakes. In discussion situations, participants are considered as "stake-holders" which implement intentions and consider objects as functional. People defend their interests and use arguments to do that. For example, Salles and his colleagues analyse farmers' strategies within water management devices. They study the integration of environmental norms in farming practices. They underline farmers' "strategic appropriation" of "agri-environmental" devices without real changes in practice (Salles, Zelem, Busca, & Gendre, 1999). In this regime, strategic capacities of actors are central. Plurality composition comes through

connecting actor vision of “community” to actors’ interests (Moody & Thévenot, 2000). This regime of “regular planned action” leads to a second definition of composition: negotiating.

Regime of familiarity deals with emotion. It aims at accounting for actors’ personal relation to a place, a custom, an object or other people. It deals with a familiar relation built along a lifetime or even longer when inscribed within a family. This kind of relation with surroundings or people needs to use another qualification of acting, other than justifying or doing something with an aim. Thévenot proposes a third “pragmatic regime” of familiarity which depends on idiosyncratic linkages with a customised environment. It has to do with “perceptual and kinaesthetic clues about familiar and customised paths through local environments which involve modifying the surroundings, as well as the habits of the human body (...). The proper language to offer accounts of what happens is far from the formal statements offering justifications. It is highly indexical and gestural” (Laurent Thévenot, 2000). How do people cope with such information in discussion situations? They have to cope with their attachments with the environment while participating and make people and things equivalent and general. Doïdy studies the tension of such engagement with environment on collective decision. He underlines the difficulties encountered when trying to value this “proximity knowledge” in public arenas. Actors can not leave all their familiar equipment at the door of the device, and they will thus use it in the collective decision making process anyway (Doïdy, 2003). It has to be taken in account in the implementation of any kind of hybrid forum. This regime leads to a third way of composing plurality: arrangement.

In situation, each individual may behave according to one of the three regimes among others, even though some are more at ease with one regime or another. These regimes give model for three levels of pluralism: attachment, objectives and common goods which must be expressed and composed in participatory processes. To make this composition possible, a device should then let diversity be defined by the participants themselves; otherwise this would happen outside of the debate situation. Making this diversity works in a participative democracy and be explicit has to be equipped. A meeting room and a self designed facilitator might not be sufficient. We designed the game explained below to encourage collective reflexivity on coping with pluralism, for people about to engage in such participatory processes or potential future pilot of these processes.

3. Concert’eau: a simulation game to experience pluralism

3.1 Gaming and NRM

Simulation and Gaming is already used in the field of NRM, proposing tools to support the involvement of stakeholders in the design of NRM policies (Barreteau, Le Page, & Perez, 2007; Duke & Geurts, 2004; Mayer & Veeneman, 2002). These games use models, or metaphors, usually focussing on the representation of the system at stake. This is a way to broaden the field of information available to participants: to give them more insights into the processes at stake (Benbasat & Lim, 2000).

The game presented below simulates the dialogue process itself. This is justified by the fact that it is the existence of an outcome of the process which is at stake rather than the nature of this outcome. It comes behind models of clustering which do provide support in finding the suitable allies in a negotiation process (Burkardt, Lamb, & Taylor, 1998) or of models, whatever the format, aiming at forecasting outcomes of negotiations (Green, 2002).

3.2 Concert'eau

This game is a descendant of Eco-logiques (Germe & Thévenot, 1996). Concert'eau's first step is similar to Eco-logiques' but the objectives are different here. Eco-logiques' aimed at analysing which arguments are more greatly considered to be legitimate in collective discussion. Concert'eau aims at observing shifts between pragmatic regimes from familiar engagement to public formats and between water management logics. It is supposed to be a generic representation of a collective decision process, with contextual elements borrowed from the case studies and rough categories of argumentation which can be observed in the Llech and Lentilla basins. This is our way to represent a collective decision support device.

The game, which is extensively includes 8 players constituting 4 teams (Do, Ré, Mi and Fa). Each team is an inhabitant of the "four seasons' valley". There is a collective discussion table at the centre of the room. There are also inhabitants' "houses": a two person table for each team at the 4 corners of the room.

Grasping participants differences through various criteria of common evaluation

The four logics or good water management described above (part 2) form 4 "departure cards" given to each two player team. This card presents the logic they will have to defend when facing events and when having to elaborate compromises with others teams. In this way, we lead players into a position where they have to follow a logic of water management and to categorise issues through this very logic: green logic (Fa team), patrimony or domestic logic (Do team), market and industrial logic (Ré team) and civic and fame logic (Mi team). Departure cards which define players' roles are an incentive to shift to the justification pragmatic regime. It aims to make people grasp participants' differences through various criteria of common evaluation. Concert'eau aims to make people shift from an a priori strategic engagement in collective discussion to a justification regime.

First step: Making players acquainted with their role and with others

Players' roles are only defined as inhabitants whose viewpoints correspond to the departure cards. In the first step we give each team 34 cards including photos, interviews extracts (such as those chosen to illustrate river basin goods above) or extracts from documents generated from interviews on the case. Teams go to their "house" and choose 6 cards among the 34, corresponding to their departure card. They have 20 minutes for this. In the next step they present these chosen cards to the other teams, and discuss the cards chosen collectively. The facilitator identifies the cards chosen by two or more teams, pointing out the possibility for agreement but also trying to make the reasons explicit for this common choice.

Second step: Drawing compromises

The context is a collective and informal meeting where players discuss how to react to events concerning some aspects of water management that they are jointly facing. They are asked to agree on a compromise. Players are incited to reach a compromise through the insurance that their proposals are likely to be taken into account provided it comes from a consensus: in case of an agreement, they inform a public authority about it. The game's facilitator chooses event results, and chooses the events' progression according to previous event discussion in order to raise trials for the players and make players experiment with the difficulties of composition. For each "event", each team has to give its own opinion. It can build its opinion during a team 5 minute discussion in their "house". They then come back to the collective table and have 10

minutes to discuss and reach a compromise with other teams. The game facilitator helps teams to write down the compromise. The teams can then sign it if they still agree.

A writing of events which aim to provide various information formats

Events are short texts (around 150 words) written on a sheet. One event is for example a retired farmer who plans to sell his land to an external investor who wants to build a large tourist resort. Events are written to give elements from diverse knowledge formats. They give information linked to the 4 teams' logics through inhabitants reactions: "Mr. Dupatelin is happy because his son could find a job. Mr Dusouci worries about water provision and environmental balance...". We then tried to provide elements to induce shifts to a proximity regime. Each team receives the same event card, but one of them gets a slightly modified one: this team receives a card, which for the same event, introduces a mention of some personal ties. In one event for example, the nephew of the green team pollutes the river whereas for the 3 others teams it is an anonymous cattle farmer who pollutes. In another event the Ré team's own property is flooded, while for the others it is the property of an anonymous inhabitant that is flooded. Since the game is designed with four events, each team receives a personalised event at one stage during the game session.

A few contextual descriptions

During the game session, we describe the context of the collective discussion very roughly: we give information neither on the public authority and status of the collective meeting, nor on any social or professional status of the players. Player roles are described very roughly. Players are inhabitants with a departure card but without profession or stake to defend. They are all considered equal except for their justification principle. They are inhabitants and not just disembodied principles so that shifts to other regimes can occur: familiarity and strategic ones. But they are only defined as inhabitants in order to limit elements which could favour strategic behaviours. Even though this strategic behaviour is one of the regimes of the theoretical framework presented in first section, a strong orientation towards this behaviour was observed in first test of the game: players tried to embody themselves in a socio-professional category to which they considered was the clearest archetype. When they had taken on their representation of this archetype, they attempted to defend its stakes.

Finally, the limitation of the information given to the players allows observation of the complementary information that they need to act and bring to the debate. Which guarantees do they need and bring in the game?

Third step: debriefing

After 3 or 4 events, players are asked to come back into their "own shoes" and to quit their Do, Ré, Mi or Fa shoes. The game facilitator's job is over; the game observer shifts to be the debriefing facilitator. The debriefing discussion deals with the participants' feelings during the game and provides a return to reality. It is organised according to the following questions:

- How did you feel during the game? Did you feel at ease?
- What difficulties did you meet during the game?
- During the events who do you think you were? Where do you think you were?
- If you played the game again, would you play the same way?
- Do you think what happened in the game could happen in the reality?

Later after the game, an individual debriefing is also planned with some players according to the observations in the game.

This game doesn't aim at making people value change or analyse such changes like in (Kergreis, 2004). Neither it is to analyse strategies in negotiation situation but at making discuss which arguments are more considered to be legitimate facing events and experiencing the difficulties of composing with different values equally legitimate and other elements rising during the game. It aims at making players endure tensions in composing plurality. It is meant to be used either in academic situations with students, or with people about to engage in a dialogue process.

3.3. A setting of experimental sociology

Concert'eau is a setting of "experimental sociology": it entails participants to get experience through simulation of interaction behavioural patterns. Such experimental posture in sociology provides a pragmatic value through a double validation: according to its internal coherence and to the trial of facts generated by the setting (Berthelot, 1988). Trial, which is a core concept of pragmatic sociology, fits this experimental posture. Experience is by itself a trial of theory to facts. Modelling of social facts which is required to design an experience is assessed with pragmatic view.

With Concert'eau, these settings fall in the category of platform among the three categories proposed by (M. Callon & Muniesa, 2006) to describe experimental settings in social sciences. Platform is an intermediate category, open to compromise and to inputs from participants, but still enforcing distance between the simulated world and the "real" world. Simulation games, such as policy exercises fall usually in this category. They are designed to facilitate hybridizing and confrontation of stakes and values. They provide situations with new interactions to be experienced by players. This facilitates an "exploration regime" (Auray, 2007): players can experience new behavioural patterns with low risk and high reversibility.

4. Discussion

4.1 Outcomes of game sessions

Game sessions have been made either with graduate students (environmental engineering, agricultural engineering, development studies, sociology) or with people already involved or prepared to be involved in dialogue processes for river basin management (two times in the Lentilla basin, once in the nearby Orb basin). These sessions came after three test sessions with colleagues from our institute. All the sessions have included a collective "hot" debriefing, while only those with people involved or about to be involved in dialogue processes have been followed by "cold" individual debriefing (ca. 2 months later).

In these sessions several characteristics of the difficulties for dealing with diversity have emerged. First, convergence of discussions went rather to weak compromises such as asking for complementary studies or for external party to provide new goods in the system. Second, without succeeding in elaborating strong compromises some players asked for external arbitration such as state arbitration.

In the attitudes in the game, difficulties to deal with disincarnated justification principles have been very strong. During the game players fleshed out their character by bringing in social categories. Implicit hierarchy in values led some players to invent for themselves new characteristics to increase their legitimacy in the debate. When domestic value comes to the

top, a player with another principle declared having 5 children to grow on this value. Information about proximity was dealt with differently: from totally unconsidered to a low profile in the discussion if value and some personal ties were rather in conflict. In the debriefing, players recognized their difficulties in dealing with this gap.

4.2 Comparison with real settings

These outcomes fit to what is reported in the literature or to what we have observed in real situation of dialogue for water management issues in the South of France. Compromises are usually weak, which is currently disqualifying these processes claimed to be non efficient. Agreement reached through an openness of the system is the most common issue. A group finally finds a collective solution through handling resources coming from outside of their territory. Historically the downstream area of Durance basin in South of France came to an agreement on water sharing through an increase of water availability in summer thanks to a dam in the upper part of the basin... however people from this upper part were not part of the agreement. State is required to come back by people unsatisfied with participative process results. Hierarchy of values, generally implicit, is always present: legitimacy of ecology face to market principles is often disqualified, unless the population playing is rather composed of green or development militants.

5. Conclusion

We have developed a simulation game, Concert'eau, which aims at making people experience the difficulties in composing with their diversity from their principles to their personal ties with the system at stake. This game is built upon a model of collective setting, the model of "régimes d'engagement", the system at stake being a river basin. This leads to raising awareness of participants in these difficulties.

The game as such should now be used in training sessions organized by the farming sector for farmers about to take part in dialogue processes. This should allow us to grasp information on innovations which emerge within the artefacts produced by the game sessions.

6. References

- Auray, N. (2007). Une autre façon de penser le lien entre technique et politique : les technologies de l'Internet et le réagencement de l'activité autour de l'exploration. In L. Thévenot (Ed.), *Politiques du proche*. Paris: La Découverte.
- Barreteau, O., Le Page, C., & Perez, P. (2007). Contribution of simulation and gaming to natural resource management issues: an introduction. *Simulation and gaming*, 38(2), 185.
- Benbasat, I., & Lim, J. (2000). Information technology support for debiasing group judgments: an empirical evaluation. *Organizational behavior and human decision processes*, 83(1), 167-183.
- Berthelot, J.-M. (1988). Les règles de la méthode sociologique où l'instauration du raisonnement expérimental. In *Les règles de la méthode sociologique* (pp. 7-67).

- Boltanski, L., & Thévenot, L. (1999). The sociology of critical capacity. *European journal of social theory*, 2(3), 359-377.
- Burkardt, N., Lamb, B. L., & Taylor, J. G. (1998). Desire to bargain and negotiation success: Lessons about the need to negotiate from six hydropower disputes. *Environmental management*, 22(6), 877-886.
- Callon, M., Lascoumes, P., & Barthes, Y. (2001). *Agir dans un monde incertain, Essai sur la démocratie technique*. Paris.
- Callon, M., & Muniesa, F. (2006). Economic Experiments and the Construction of Markets. In D. MacKenzie, F. Muniesa & L. Siu (Eds.), *Performing Economics: How Markets Are Constructed*. Princeton: Princeton University Press.
- Doidy, E. (2003). Faire entendre la voix des usagers dans les concertations environnementales. *sociologie pratique*, 7(Gérer l'environnement, le temps de l'action concertée), 49-64.
- Duke, R. D., & Geurts, J. L. A. (2004). *Policy games for strategic management*: Dutch University Press.
- Germe, J.-F., & Thévenot, L. (1996). *Le traitement local des conflits en matière d'environnement Jeu éco-Logiques Rapport Final Volume 2 : Un jeu pédagogique sur les logiques d'argumentation dans les conflits autour de projets d'aménagement*. Paris: Institut international de Paris La Défense.
- Green, K. C. (2002). Forecasting decisions in conflict situations: a comparison of game theory, role-playing and unaided judgment. *International Journal of Forecasting*, 18(3), 321-344.
- Kergreis, S. (2004). *Régulations cognitives et sociales dans les concertations agri-environnementales : effets des contextes sociaux et des supports de discussion sur l'évolution des connaissances descriptives et évaluatives des bordures de champs agricoles*. Université de Rennes.
- Mayer, I., & Veeneman, W. (Eds.). (2002). *Games in a World of Infrastructures. Simulation-games for Research, Learning and Intervention*. Delft: Eburon.
- Moody, M., & Thévenot, L. (2000). Comparing models of strategy, interests, and the public good in French and American environmental disputes. In M. Lamont & L. Thévenot (Eds.), *Rethinking comparative cultural sociology : repertoires of evaluation in France and the United States* (pp. 273-305): Cambridge university press.
- Riaux, J., & Richard-Ferroujji, A. (2006). *Mises à l'épreuve et adaptations de la gestion collective de l'eau de la Lentilla*. Paper presented at the Séminaire Wademed - Avenir de l'agriculture Irriguée en Méditerranée, Cahors.
- Salles, D., Zelem, M.-C., Busca, D., & Gendre, C. (1999). *Les stratégies des agriculteurs face aux dispositifs de gestion de l'eau: CERTOP-CNRS GIS ECOBAG*.
- Thévenot, L. (2000). Which road to follow ? The moral complexity of an "equipped humanity". In J. Law & A. Mol (Eds.), *Complexities in Science, Technology and Medicine*: Duke University Press.
- Thévenot, L. (2006). *L'action au pluriel. Sociologie des régimes d'engagement*: La Découverte.