Chapter 2
The commodian stance:
interpersonal skills and expertise

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As suggested in the introduction, companion modelling is a stance, not merely an approach. By stance we mean someone's moral attitude. By analogy with the analysis of literary stances by Meizoz (2007), we consider that the scientist involved in 'implicated' research becomes part of the social play. So in a companion modelling approach, he goes beyond the boundaries of the scientific field. He enters the public arena and sends out a certain image of himself. His stance presents a double dimension, that is, rhetorical and action based. Stance is conveyed, therefore, by taking a moral, affective, social, philosophical and political standpoint that leads to action. The commodian stance is thus our term for referring to a particular way of considering the position of the researcher in the relationship between science and society.

In Chapter 1 we set out the key components governing our approach (e.g. protagonists, sequences, etc.) in order to state the invariants noted during its implementation. In Chapter 2 we shall explore the stance adopted by the commodian when facilitating a companion modelling approach.

To characterize how ComMod processes operate we need to revisit the fundamental principles of this facilitation or 'animation'. Animate derives from the Latin *animare*, which means 'breathe life into'. Whether or not you choose to restrict yourself to its metaphysical, mythological or artistic sense, the term has long been linked with principles of creation, movement and life. Derived from popular education, group 'animation', or more usually in English, group 'facilitation', has been a professional activity in France since the 1960s, with its vocational classification, governed by a code of ethics, occurring in specific domains (e.g. sociocultural, business, association, training, education) (Poujol, 1994). Its functions have diversified, with the group facilitator playing a

role in the socialization of certain individuals in a fun or recreative, educative or cultural, orthopaedic or innovative way. However, the understanding of the facilitator's activity is subject to controversy in sociology. Augustin and Gillet (2000) suggested that there are two trends. Some, emanating from Christian or lay circles of influence, consider their actions as liberating, instilling vitality and vigour into the group and the lives of individuals in society. Others take the opposite view, that the sole purpose of facilitation is to establish social control and sustain the relationships of domination and social norms imposed on those individuals with the least social capital. Under this deterministic vision, the facilitators combine to manipulate and condition individuals. Sometimes a collective emancipation movement, sometimes a society preservation instrument, these two visions of facilitation are contradictory. They are based on premises and philosophical perspectives that render them virtually irreconcilable (Gillet, 1995). Starting from these contradictory views, the critical or humanist sociologies do not take into account the wealth of stakeholders' interactions in a group and their relationship with the environment, nor grasp the facilitation as *praxis*, a way of acting rooted in the past and looking towards the future, which requires the facilitator to show genuine strategic intelligence in supporting the stakeholders in a given social situation (Augustin and Gillet, 2000).

Companion modelling is a participative approach. Participative approaches have been developed with the agreement of international development institutions since the 1960s. This was done in order to take into account local stakeholders as legitimate partners of the research and development projects that affect them (Olivier de Sardan and Paquot, 1991; d'Aquino, 2002). Yet the many ways of applying the concept of participation (Pretty, 1995) have fuelled widespread criticism, including the performance of participative approaches. Barnaud (2008) distinguishes between three major types of limitation: intrinsic, horizontal and vertical. We will consider the first type here: we shall return to the horizontal and vertical limits described by Barnaud (2008) later in the chapter. Firstly, intrinsic limits relating to the polysemy and ambiguity of the very concept of participation, or calling into question the objective of participation in which stakeholders should ultimately be released from exogenous driving forces. These first criticisms question the genuinely participative nature of methods imposed by outside participants, whether or not they are well intentioned. They also emphasize a lack of understanding of the complexity of local social situations, when maximum participation of all stakeholders at all stages in the process is requested (Barnaud, 2008). Some authors underline the decisive effect of the designer's behaviour on the progress of his approach (d'Aquino, 2002; Chambers, 1994a; Scoones and Thompson, 1994; Water-Bayer and Bayer, 1995). Where does the commodian stand in implementing the approach: do they encourage the local stakeholders to reflect and decide on options for themselves or guide their choice of development? Do they act to shrug off their own perceptions, their own choice of development, frequently discipline based, to help the society to decide its future for itself? Is their action liberating or, on the contrary, manipulative?

To respond to these questions we must return to the stance described in the ComMod Charter (ComMod, 2005) to demonstrate how it stands out from other participative approaches. We shall then reveal how adhering to the principles of the charter is not rhetorical but the actual way in which the commodian tackles his field and facilitates the companion modelling approach. We are seeking here to demonstrate that the commodian stance, as described in the charter (interpersonal skills), and its place at the start of the

ComMod process, are the forerunner of practices, methods and techniques (know-how), which are activated in order to 'animate', in the sense of give life to and/or invigorate, the approach and the communities involved.

The commodian stance: principles of original interpersonal skills

Principles of the commodian stance

The stance of the designer-facilitator[1] of a companion modelling approach was established in the first version of an ethical charter published initially in English in the *Journal of Artificial Societies and Social Simulation* (ComMod group, 2003), then revised and amended in the French version (Collectif ComMod, 2005). This version was widely commented on in issue 13 of the journal *Natures Sciences Sociétés*. We indicated in this charter that companion modelling was an 'implied' research approach, imposing a special relationship between science and society. In fact, we consider that our research practices must be assessed according to traditional procedures and criteria in science but also with respect to questions raised in the field. We recognize the uncertainty of decision-making situations in managing renewable and environmental resources and the legitimacy of multiple viewpoints in dealing with this uncertainty, despite these being occasionally contradictory. One issue in our research action is considering, during an iterative exchange-focused process, the comprehension and analysis of these various viewpoints with all stakeholders in the social and ecological system in question. To achieve this, we believe that this process must be capable of explaining the implicit hypotheses assisting in building up the speeches, representations and perceptions of each individual. The commodians are not bystanders in this implicated research. They participate in the process that they are facilitating and, therefore, must also explicitly render their vision of the world. We view scientific knowledge as just one type of knowledge among all the others present. The companion modelling approach relies on intermediate objects constructed with the stakeholders. These intermediate objects will help explain hypotheses and formulate scenarios of change in their system, thereby exploring the various options and thus dealing with the uncertainty.

Originality among other participative approaches and modelling in natural resource management as seen by the commodians

From the beginning of the companion modelling approach, researchers took a novel stance to distinguish it from two different practices, that is, natural resource management (NRM) modelling and participative approaches. This attempt at differentiation initiated 12 years ago is continuing and has conveyed since its origins the meeting of two requirements concentrating around a new concept – companion modelling.

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[1] We shall henceforth use the term 'designer' to denote the leader or sponsor of a ComMod approach, and the term 'facilitator' to designate their activities in a collective key moment (see below).

For researchers from the world of participation, companion modelling was a means of moderating far more the influence of the subjectivity of the researchers leading the participation. Firstly, inconsistent viewpoints can be retained under the chosen formalization (object-orientated modelling). Thus, it limits the involuntary tendency of the researcher to twist the perceptions of others to suit his own when he attempts to reorganize the diversity to make it coherent. Secondly, it introduces stakeholder participation well upstream of the usual participative approaches and it relies on far more in-depth testing of the proposed viewpoints (diagnostics) by bringing these first diagnostics into play (*cf.* simulation)[2].

The new concept of companion modelling was noted by researchers from the world of NRM modelling for its attachment to a 'post-normal' posture (Funtowicz and Ravetz, 1993), whereby a model designed by a disparate collection of scientists and non-scientists could be more valid and relevant than one emerging from purely academic theory. As questions continued to be raised over expert systems, these researchers considered that modelling a complex system could only be relevant and valid through far greater integration of the lay stakeholders' perceptions of the system. They also felt that NRM could not be reduced to only technical and scientific issues. The stakes, practices and motives of stakeholders should be taken into account upstream of scientists defining the issues or improvements in the system.

The companion modelling approach was conceived from the start to stand apart from an approach where lay stakeholders are considered as agents in a system where the scientist had to understand their behaviour to be able to include them in his analysis (as was the case in the games theory applied to NRM). We focused more on considering lay stakeholders to be partners with the scientist in a joint understanding of the behaviour and analyses of all concerned (including the scientist).

Once this became a joint issue for members of both communities (participative approaches and NRM modelling), the specific features of companion modelling continued to take shape as experiments and methodological concepts progressed, as with progress in other trends of NRM modelling and participation. It seems today that the originality of the companion modelling posture lies in this initial positioning as well as in the explanation of its ethical and methodological implications.

Ethically, what makes this approach stand out from its neighbours, the participation and modelling worlds, is that the ComMod designer recognizes that his analysis and knowledge are only one viewpoint among many in the reality of the field and its related issues. In the ComMod Charter (Collectif ComMod, 2005), which describes the ethical position of the group, we have clearly stated our awareness that our intervention is subjective. Accepting our subjectivity, the prism of our view and the particularity of our viewpoints urged us to control it as best we can, hence the need for the formalization expressed in the ComMod Charter. This still distinguishes the ComMod process from the majority of other participative approaches. They have an objective vision of what

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[2] Is technical improvement in our practices really going to be enough to preserve resources? Will it really be possible to correct current tendencies with the current rules? Will improved protection of resources really have a significant economic impact on our revenues?

is 'good', 'fair', 'shared' or 'primordial'[3], like the critical sociology of participation that proves without question the subjectivity of participative approaches but does not recognize the subjectivity of its own analyses and judgement values.

Methodologically, the 'focal point' setting companion approaches apart is still, and this relates to the point above, the aim to express the diversity of viewpoints in the system, rather than starting by constructing a common representation. Helping to distinguish between and formalize various viewpoints in the system make up the first essential key stage in any companion modelling process. This is done without giving priority to consistency between these viewpoints (or with the designer's viewpoint). The continuing methodological process is designed to take this diversity into account in the best way possible (i.e. comprehension and validity of the diversity by the assembled stakeholders, conceptual formalization of this diversity and so on). Recognition of the existence of these multiple viewpoints helps build a representation shared by all protagonists, without this inevitably culminating in a common, unique and consensual representation.

Companion modelling is today pursuing its specification and, therefore, its identity relative to the other approaches, by widening its questioning on new themes (see the remainder of the work, for example, Chapter 4, taking the social context into account and Chapter 10, how to comprehend the multi-levels, etc.).

Originality of the ComMod approach as perceived by other researchers

The originality we have just described is also perceived outside the ComMod community and was expressed in comments made when the ComMod Charter was published in the journal *Natures Sciences Sociétés* (Collectif ComMod, 2005). These comments encouraged us to state certain principles we believe to be fundamental to our approach and render the stance of the commodian relatively novel compared with the facilitation methods of other types of participative approach or approaches proposed by groups of researchers working on the design of regional projects (Lardon, 2005). We have retained six.

(i) The initial definition of the question and partners to be involved in the approach. Regardless of whether the request comes from researchers, development agencies or political decision-makers, the commodian must state the nature and epistemological status of the questions from the field (Laloë, 2005). They must then investigate, in the context of an interdisciplinary research group and stakeholders in the field, of what does the involvement of each discipline consist and the various types of knowledge present around the table.

(ii) The insertion of the modelling activity in a collective thought process. This 'participative modelling' results in a representation of the 'shared' reality, even a search for multiple consensus that adds a new collective dimension (Hervé, 2005). The approach has a duty to replace the stakeholders (i.e. scientists, managers and operators) in a well-regulated set design. Depending on their role in society and in relation to the question asked, each individual has the legitimacy to suggest interconfrontational representations.

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[3] For example, this also still distinguishes companion modelling from other participative approaches developed around certain environmental issues, which consider them as 'meta-issues' that can only be reconsidered by the partners. Another example can be found in other modelling approaches, which consider the perceptions of other stakeholders in the system to be modelled as less rigorous versions but which must be integrated with (their?) theoretical conceptualization.

This is realized during a hypothetical deductive process, which ultimately opens up a series of hypotheses accepted by all and developed into scenarios.

(iii) Leading the approach relying on collective key moments in priority. During key moments the commodian uses tools and suggests methods to explain any potentially contradictory viewpoints and put the stakeholders in a situation for action. This involves encouraging better understanding of the relative positions of each individual and their effects on the system dynamics rather than a passive application of recommendations by experts (Hervé, 2005).

(iv) The essential contribution of accessible formalization methods. In a complex situation or in contexts where science sheds little light on the matter, the effort of formalization can provide invaluable assistance in conceptual clarification and communication between stakeholders with different knowledge and divergent interests (Lobry, 2005). The commodian will, therefore, suggest methods to stimulate reflective thinking on the framework of rules for each individual's activities, and be capable of explaining these rules whilst respecting scientific methodology and the stakeholders involved.

(v) 'Good conduct' in terms of modelling. Part of the originality of the approach, as emphasized by Pavé (2005), lies in the type of objects modelled and the status given to the modelling and the modeller. The models used, which are frequently co-constructed, are never in a stable state, therefore, never truly validated, but they do not play a normative role. They serve basically as mediators in the social dialogue to explore a field of options. The modeller's major concern, therefore, becomes transparency in the field and the model's operating limits, and emphasizing the hypotheses governing its development.

(vi) The refusal to manipulate using the model's outputs. Given the complexity of the situations faced, it is important not to ignore the possibility of the suggestive power of models, their plasticity and the events they are used to produce being used for manipulative purposes (Mullon, 2005). The commodian, therefore, devotes part of his energy to keeping a firm grip on the quantitative or spatial validity of the data produced or to preventing the aesthetics or visual aspect of the outputs proposed by the model from obscuring the relevance of reflective thinking. For example, it is important to know how to assess if a simulation proving statistically incorrect remains spatially acceptable, in other words capable of correctly representing the general configuration of spatial structures (Guermond, 2005).

The ComMod Charter sets out the constituent components of the commodian's interpersonal skills. Taking into account that he operates in a social and ecological system where others have already built up bodies of knowledge, both scientific and non-scientific, he considers them all as legitimate and does not place science on a pedestal. Aware of his involvement in the field, he knows that as soon as he intervenes, his action is interpreted by the stakeholders, turning him into another component in the system. He attempts to be as explicit as possible about the hypotheses forming the basis for his representation and the milestones along the way in his approach, so that it and the results obtained are considered legitimate by all concerned. As the system studied is viewed as complex, uncertain and changing, there is no ideal solution, simply agreement on the principles for developing solutions.

Companion modelling experiments have been developed over 10 years in a variety of social, ecological, political and economic contexts. The commodians have facilitated these approaches by attempting to apply the theoretical principles whilst adapting them

to the reality of the field. Thus, how are these interpersonal skills, this stance, conveyed in the multiple and varied expertise developed in these various areas? This question is analysed below from the perspective of initiating the approach; to what extent is how to tackle a field dependent on the interpersonal skills of the commodian. Later we shall turn to the practical translation of the stance in how the commodian runs the entire process and, more specifically, the collective key moments.

The commodian's role in initiating the approach

The way social demand is taken into account or, more widely, in the way the approach is initiated is essential when running a companion modelling approach. It will influence the way the issue is elicited and adjusted to the context, the partnership to be established, the stakeholders involved and the definition of roles played by the designer during the process.

Different ways of initialization of a companion modelling approach

An analysis of various case studies reveals much variation in the initiation of companion modelling approaches, especially in the expression of social demand behind the implementation of a CommMod approach. However, this social demand, which justifies applied research activities, is frequently vague in the field. A researcher's first task is to deconstruct the expectations of social subjects, their formulations of the joint meaning and build them back up into research issues with which the scientist can then deal (Castel, 2002). A companion modelling approach is subject to this same reality. Thus the social demand behind the initialization of a ComMod approach varies between two extreme situations:
– firstly, a specific demand, formulated by an identified sponsor (the commodian thus has an explicit mandate to deal with the subject)
– secondly, a vague, non-explicit demand, without a specific group to deal with it.

In the first situation, the local stakeholders have learnt of the approach (through exchanges with stakeholders in another field where it has been set up or through a simple presentation of a case study) and call on a commodian to set it up in their field. The approach is totally unknown locally in the second situation. As no one is familiar with the companion modelling approach, it is up to the commodian to initiate the approach after a context analysis. A midway solution has been encountered where a local institution has a mandate to work on an issue but has no idea which methodology to use.

This diversity in approach initialization impacts on the legitimacy of the intervention and the designer solicited. Where the commodian is part of a new field, he must construct a necessary legitimacy to invite the protagonists of the approach and construct the group he wishes to lead in it. He normally constructs his legitimacy based on the recognized legitimacy of other stakeholders, persons and resources already in the field. This affiliation to a partner must be carefully thought through as it determines the way in which the approach designer will be perceived (see Chapter 5). The initial analysis of the context plays a fundamental role here.

In these various scenarios, the respective influences of the commodian and other stakeholders to convert a potential demand into a workable question for the companion

modelling process vary greatly, more so when the demand is not always clearly expressed. Whether mandated or not, the researcher must make an effort to translate and deconstruct the expectations of local stakeholders before co-constructing this demand with them. This way the commodians act as midwives, by sketching a Socratic method.

From social demand to supporting the group taking it on

Once this social demand has been identified, translated and reformulated into something comprehensible to the scientific activity, questions of identification, definition and involvement of the group(s) in charge, that is, stakeholders in the companion modelling approach are raised, as in all participative approaches. Before seeing how commodians address these questions, however, we feel it important to revisit briefly the criticisms of participative approaches regarding their insertion in a pre-existing social and political context.

The first criticism, so-called 'vertical', condemns the localism of participative approaches, which can only claim success locally and for a limited time due to the mistrust of decentralized institutions; yet these institutions are in a prime position to make this success endure and incorporate it into the decentralization process (Barnaud, 2008). The so-called 'horizontal' limitations are that participative approaches capable of reducing social inequalities are rare, despite their stated goal. Due in particular to a naïve belief in the existence of a homogeneous community with a strong social cohesion, they have frequently referred to representatives unique in their community, thereby treating with disdain the diversity of local hierarchical structures, interests and strategies and giving a boost to local elites, concentrating new sources of power in their hands (Barnaud, 2008).

Noting these criticisms, the commodian is fully aware that he is intervening in places that are not devoid of institutions or power relationships. Thus more often than not they analyse the social context in which they are planning to intervene. This analysis can be more or less advanced (see Chapter 4). Let us now see how that translates from the point of view of inserting the approach into existing consultation opportunities (see Chapter 4 for an in-depth description of the context and more specifically, the formulation of social demand). An analysis of case studies reveals three scenarios.

In the first, the commodian intervenes in a field that has no group to deal with the question that the companion modelling approach wishes to address. In this case, they go with the institution likely to be the focus for reflective thinking, and identify the relevant stakeholders to co-construct the group designated for the companion modelling approach. This cannot happen without analysing the context so that the options proposed by the institution can be discussed. For example, in the Nan case study, in the context of open conflict between a national park and highland communities, there was no pre-existing arena for consultation, no incipient dialogue, and the relations between the various parties *in situ* were characterized by mutual distrust and misconception. In an attempt to establish a dialogue between these stakeholders, the commodian suggested an arena for consultation, for which participants were chosen so that the various interests at issue (especially in villages) could be aired. The legitimacy of such a group was, however, weak. The choice of participants was discussed systematically with the legal representatives of the institutions involved (i.e. village leaders, head of the national park) to give extra weight (Barnaud, 2008). However, although the ComMod process improved rela-

tions between the park agents and the villagers up to a point, the arena for consultation created did not last beyond its end.

In the second scenario, analysing the intervention context identified the existence of multiple groups dealing with related questions. Thus in the case of Domino Senegal, the issue of water and land management was dealt with in multiple consultation areas (Diop Gaye *et al.*, 2007). These areas nevertheless remained disjointed and it was impossible to address the question of land allocation coherently, with the added complication of integrating several organizational levels. The various social and economic studies identified the institutions and relevant stakeholders with which to address these issues under a companion modelling approach. A user committee was set up around the approach with committee members taken from local, municipal, regional and national institutions, therefore, the issue of land allocation could be addressed as a whole.

The third scenario covers situations where the question the commodian is seeking to address is already mandated to an institution responsible for organizing the consultation on this topic. However, several situations can appear from the point of view of social demand. For example, the urban area of Nîmes-Métropole submitted an explicit demand to the commodian. In Domino Réunion, the demand was instigated by the commodian. In La Réunion, although all stakeholders in the regional development, regardless of their scale of intervention, all noted competitive dynamics in using a restricted territory, the problem of ensuring consistency in multiple choices was evaded, overshadowed by sectoral issues. The commodians, therefore, formed an initial group of researchers and stakeholders from the main sectors occupying the area to construct together a proto-type representation of intersectoral interactions. Only then did this first group, with its prototype, lodge a request with the unit in charge of revising the Regional Development Scheme (SAR) to continue with the companion modelling approach incorporated into the consultation process (Daré *et al.,* 2008).

Finally, these examples suggest that the commodian can sponsor the approach (SylvoPast), sponsor and fund those developed under certain research and development projects (e.g. SosteniCAP, AguAloca, Njoobaari, etc.) or simply be a companion to it (Ouessant, Nîmes-Métropole, etc.). Note also that these various positions can change during the approach cycles. Thus, the first loop in Domino Réunion was led by commodians then sponsoring the approach. They then became companions in the approach when the SAR unit took over the running of it.

Faced with criticisms on the naivety of sponsors of participative approaches, the commodians make no claims in believing they have arrived in virgin institutional spaces or egalitarian social systems where interactions between players are always consensual (see Chapter 5). However, the institutions do not always have the mandate, legitimacy or recognized neutrality required to sponsor a companion modelling approach with regard to its principles. This explains why the commodian has been forced to propose constructing new arenas of consultation grouping relevant stakeholders to deal with a given issue. By so doing, the commodian is aware of creating an arena that will find a niche in interactions with other formal or informal arenas already in existence but still likely to influence the debates within the ComMod arena. How and to what extent do pre-existing and newly created arenas influence each other? The question remains open and the evaluation suggests a few ideas for reflective thinking and improving knowledge on this point (see Chapter 6).

Roles of the commodians and facilitation techniques employed during an adaptive and iterative approach

We have focused on two levels of analysis to characterize the role of the designer during a companion modelling approach. The first covers the entire approach. The second focuses on facilitating collective key moments, particularly the simulation phases.

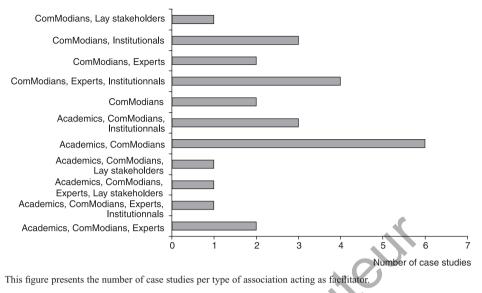## Who facilitates and at which phases in the process?

Our analysis first focuses on the entire companion modelling process. We shall initially state who are the study designers and then analyse when precisely they intervene.

To understand the nature of associations between the different statuses of the designers during the various phases in the process we must first return to the question of their legitimacy. The commodian intervenes in a social system that, socially speaking, is not native to him. Companion modelling in this context aims firstly to facilitate collective reflective thinking between stakeholders who have a certain legitimacy in the eyes of the commodian as well as other members of the invited group. (We shall return to the legitimization of protagonists invited to take part in the process when analysing the initial awareness-raising phase). However, we make the assumption that in turning social phenomena into science by collaboration between researchers and their lay counterparts, these stakeholders activate the tools and dynamics to test other stakeholders, indications of their legitimacy that borrow from a range evolving between the two approaches described by Weber (Daré *et al.*, 2004). The first covers the 'subsequent legitimization of relations of domination' and the second considers the legitimate order as a guide, a convention which the stakeholder holds in his own intimacy (Corcuff and Lafaye, 1996). By so doing, legitimacy is not a state, but is built up in the interaction with other participants. Legitimacy can be transitive (the designer takes his legitimacy from the institution guaranteeing the process), self-improving (change based on interactions between the participants and/or the designer), circumspect (the legitimacy of a role-play session leader is not necessarily enough to facilitate a project restitution, a sponsor may not possess a sufficiently recognized legitimacy to facilitate the design phase) or, on the contrary, open (the legitimacy of a participant in the approach can be used to boost his legitimacy in other arenas of the consultation).

A facilitation team comprising members of different statuses

Here, we summarize briefly the different types of protagonists discussed in Chapter 1 by distinguishing the forms of knowledge mobilized during the approach, that is, lay, researcher, technician, institution, commodian and student. We are simplifying it to describe the status of designers by considering students – apprentice commodians – as commodians as these two types do not belong to the social system studied (Figure 2.1).

In most cases, the entire process was led by a team made up of members of different status. Only two experiments were run by commodians alone. The designer of a companion process is never alone whatever the circumstances; the approach is driven by a facilitating team with set roles and intervention times split between its members.

This figure presents the number of case studies per type of association acting as facilitator.

Figure 2.1. Association of various types of facilitator intervening during the companion modelling process.

Who facilitates each phase?

Our companion modelling approach can be divided into six phases described in the canvases (see Chapter 1): awareness raising, design, implementation, validation, restitution and simulation/game. These phases do not necessarily follow each other but they make up a complete cycle. Based on the canvases of 27 case studies, we analysed the status of individuals responsible for facilitation in the main phases.

Responding to a demand they have identified or for which they have been solicited by a stakeholder or institution, the commodian facilitates the first stage of making contact with other local partners alone or with a local sponsor. In 10 out of 27 cases he was supported by local stakeholders (i.e. academic, expert or institutional).

Once the social demand has been formalized, the aim of this phase is to raise the awareness of the various protagonists to the issues, constraints, limitations, requirements and advantages of the companion modelling approach. In this phase, the commodian relies on a presentation of past experience, thus building up their legitimacy in the eyes of local stakeholders. The commodian can call on institutions or local stakeholders acknowledged to be relevant to address the topic in question and thereby boost his position. A transfer of legitimacy thus occurs. The rare circumstances that do not require the commodian to organize this awareness-raising phase are when a research project has been defined clearly by non-commodian researchers already installed in the study field (e.g. Luberon, Ubon Rice Seeds and Tarawa). These researchers normally have submitted an intervention request to the commodians. The Luberon and Larzac cases are explained by the existence of strong local groups or by filiation of cases studies, so much so that it is institutions or institutions and experts that presented the proposed experimentation.

The need for familiarity with the tools and methods for formalizing knowledge and model design and implementation explains why in particular only a few academics manage to facilitate the model design and implementation phases by themselves. This was true for the implementation of the Ouessant case study. Note that for Ouessant this was a desire expressed by the project designers, which, given the technically advanced formalization tools used, meant that one participant had to be capable of taking charge of the development/modelling aspects. A special training course was organized for him. These phases are normally facilitated by a commodian alone or in a group of facilitators.

As a companion modelling approach is initiated by the explicit demand of mandate institutions or based on a need analysed by the researcher, the restitution phase for the results of the initiative is logically facilitated by the commodian, more often than not supported by the sponsor or institutional stakeholders. Lastly, those rare cases without a restitution phase are explained by the fact that they have yet to be completed or the evolution of the context was unfavourable to its continuing.

Box 2.1 – Animation of the different phases of the ComMod process in the Pays de Caux.

During the awareness-raising phase, the designer-facilitator of the companion modelling approach used some illustrations from past experiences. She organized discussions to help the three extension services (Farmers' Association of Seine Maritime, Veules-Dun Watershed Management Committee and the Regional Association for Soil Preservation) consulted to formulate the common question they wanted to deal with in the framework of a ComMod process: how to engage and support a dialogue between stakeholders on the management of erosive runoff at the watershed scale that would include the implementation of both better agricultural practices and landscape structures (e.g. grass strips, storage ponds). The main phases of the approach, the usable tools, the implications in terms of workload, etc., were explained to the stakeholders. The facilitator took charge of running the following steps: design, implementation, exploratory simulation and diffusion. She was assisted by students (in particular for data collection, design and animation of the role-playing game) or by commodians (in particular for the implementation of the models).

The ComMod processes are organized around collective key moments. The Pays de Caux case study was the object of accurate monitoring of trade during the collective key moments and the data were recorded in a logbook to reconstitute the network of participants present. The analysis of the social network formed around the ComMod process showed the centrality of the commodian, the designer-facilitator of the process (the white square in the centre of the Figure 2.2, see colour page).

Four groups can be distinguished in the figure. The first brings together participants involved in the design of the model and role-playing game. The size of the symbols used allows us to identify the hard core of this group. Two other groups show the participants involved in the two sessions of role-playing game organized in July 2007. Finally, the last group is composed of leaders of watershed management committees of the Seine Maritime region who attended a meeting on the restitution of the game results to make them sensitive to the use of this game with stakeholders from their own territory. Stakeholders (light grey circles) played a part not only during exploratory simulation exercises, but also in the design phase. The small more isolated groups, because they were less involved in terms of duration in the project, mainly included scientists (black squares) belonging to the ComMod network or scientists and students involved in the evaluation of the approach. Occasionally, technical experts (dark grey triangle) were also consulted to gather additional data or stakeholders and students (light grey circles) to test the role-playing game.

With the results of this final phase we return to the issue of the legitimacy of members of the facilitation team. The fact that legitimacy is partly contingent on the approach and partly a result of external interactions explains the varying associations of facilitator status for each of the ComMod phases. The strong presence of institutions in facilitating the awareness-raising and restitution phases is open to question. Is this not a means of supervising the system? Does this not open up the risk of one minority instrumentalizing the entire approach, with the companion modelling thus lapsing into other participative approaches? Or, on the contrary, is the presence of institutions necessary to guarantee the experimentation and sustain the results? Finally, these results show that the commodian, whether alone or supported, occupies a central position in facilitating the phases of the initiative (see Box 2.1). This raises the question of the complexity of the role of facilitator in the process and the abilities required to take on this function.

The various roles played by the commodian

Now, we analyse the various roles played by the facilitators to inspire and bring to life the groups formed around a ComMod approach. To achieve this, having reminded ourselves of the main roles traditionally performed by socio-cultural leaders or facilitators of participative approaches, we shall use an analysis of the dynamics of restricted groups developed by psychosociologists as a basis for characterizing as fully as possible the changes in participant groups and the interventions by their facilitators.

We consider the definition of the role given by Rocheblave-Spenlé quoted by Anzieu and Martin (1968): 'the role is an organized model of behaviours relating to a certain position of the individual in an interactional whole'. The interactional whole considered here arises from interactions between participants throughout the modelling approach. The notion of role is linked to concepts of standards and cultural modes (Linton, 1977), however, it emerges that socio-cultural or participative approach facilitators are basically looking at four roles (Creighton, 2005; Duchesne and Haegel, 2004; Maccio, 2002; Schein, 1988).

The facilitator takes on the role of guide when he helps the group remain on the chosen path, by stating and repeating the aims of the meeting (which may or may not have been defined with the participants). They restate the group's operating rules agreed with the participants. They take the decisions on the appropriate methods to achieve the group's aims. They attempt to reduce intrusive interactions that are full of emotion and likely to force the group off course compared with its aims. Like a moderator, they must encourage clear, accepted communication by regulating the contributions and ensuring that each individual feels they are understood and listened to (if necessary by reformulating or summarizing an intervention). They also act as a mediator to prevent and calm tensions and disputes by specifying prohibited behaviours, by allowing feelings and problems to be expressed within a framework and set time (if necessary by reformulating accusatory comments and defusing charged emotions), by suggesting a procedure to resolve emotional tension and by putting forward a range of options when the group finds itself in deadlock. They also guarantee the unity of the group by trying to maintain or even increase its cohesion. Here they must mark the consensus stages to stimulate the group and boost morale, summarize and clarify the direction and propose tools and alternatives when the group gets stuck.

During the companion modelling process the participants are put in situations of action, reflective thinking or exchange, which cause them to interact. This not only

encourages the promotion of understanding between the various parties involved but also nurtures or even creates a social link. Henceforth the various participants in a companion modelling approach, regardless of their level of involvement, become temporary members of a group, an 'us', which can be short-lived but very real as long as the exercise lasts (see Chapters 6 and 9). This 'us' is an opportunity for interpersonal, even interinstitutional exchanges, when they legitimately represent institutions. The stakeholders get to know a topic during these exchanges and question, transform and translate it, projecting their own issues into it to turn it into a shared object, the medium for their discussion within the group. If the participants continue the process despite the social and economic costs inherent in the approach (Levrel *et al.*, 2009), it is because they find (or hope to find) an interest in the collective interaction produced in this action arena. We therefore consider that regular participants form a genuine group in a companion modelling approach.
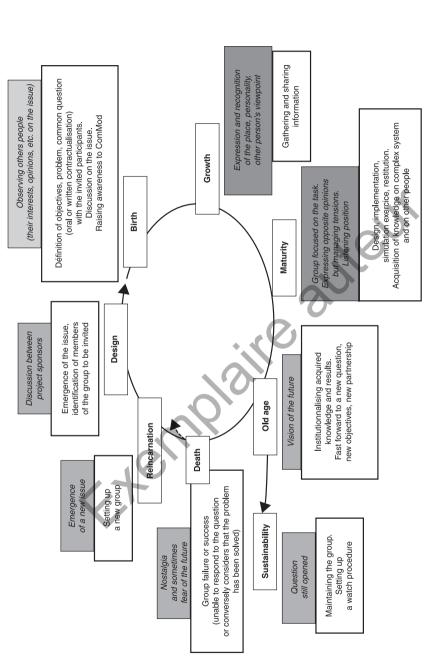
Psychosociological work on the dynamics of restricted groups has developed since Lewin (1959) showed that the behaviours and interactions of their members fluctuated between phases dominated by emotions or by the activities causing them to meet (Anzieu and Martin, 1968; Bales, 1950; Hare, 1994).

Analysing the life cycle of a group of individuals participating in a ComMod process shows that the roles of the facilitator change in line with its various stages (Figure 2.3). For example, when the group is formed, the facilitator's team presents the subject to the people invited, which results in questions being asked by the group. The individuals present watch themselves trying to understand, to gauge the relevance of each other's presence and the suggested organization. In this phase, the facilitator specifies the group's objectives, explains the move between the subject of the invitation and the issue asked of the group, encourages discussion between the members and presents the methodology. Tensions combine during the various stages in the life cycle to perform the task. However, as the approach advances and they meet successively, the stakeholders learn more about each other, a sense of trust builds up between them and they gain a better understanding of others' viewpoints, without necessarily agreeing with them. All this combines to reduce tensions or at least better cope with them.

The facilitator thus sometimes acts as a moderator, sometimes as a mediator and sometimes to ensure the group dynamics. However, he does not guide in the sense that the facilitator of a ComMod approach is familiar with the overall direction (the subject that is going to be dealt with), but he is aware that the group is potentially faced with a choice of multiple paths to achieve a single objective. This is one major distinction compared with traditional facilitator roles and is a direct spin-off from the post-normal and recognition stance of the uncertain nature of changes in the social and ecological system in which he develops his approach.

Intense collective key moments of exchange that 'fashion' the group

Chapter 1 showed that the companion modelling approach undergoes periods of intense collective exchanges and collective key moments, which alternate with more stand-alone periods of compiling/taking data, design and reflective thinking. Seven logbooks were used to record the information required to analyse the collective key moments. Most collective key moments are organized for meetings and discussions with local stakeholders, commodians or between project sponsors. The design and simulation phases are performed systematically with commodians or apprentice commodians who

Observing others people
(their interests, opinions, etc. on the issue)

Définition of objectives, problem, common question
(oral or written contractualisation)
with the invited participants.
Discussion on the issue.
Raising awareness to ComMod

Expression and recognition
of the place, personality,
other person's viewpoint

Gathering and sharing
information

Birth

Growth

Maturity

Design implementation,
simulation exercice, restitution.
Acquisition of knowledge on complex system
and on other people

Group focused on the task.
Expressing opposite opinions
but managing tensions.
Listening position

Discussion between
project sponsors

Emergence of the issue,
identification of members
of the group to be invited

Design

Reincarnation

Old age

Vision of the future

Institutionnalising acquired
knowledge and results.
Fast forward to a new question,
new objectives, new partnership

Emergence
of a new issue

Setting up
a new group

Death

Nostalgia
and sometimes
fear of the future

Group failure or success
(unable to respond to the question
or conversely considers that the problem
has been solved)

Sustainability

Question
still opened

Maintaining the group.
Setting up
a watch procedure

Key: the grey boxes describe the atmosphere between the group members and the modalities for action and exchange. The deeper the colour, the greater and tensions and the more interactions are emotionally-charged the interactions. The group's expectations and objectives are in white.

Figure 2.3. The stages in a ComMod group life cycle.

have collected the information exchanged during these meetings. In addition, when participants are put in situations for action, as part of a role-playing game or when creating the conceptual model, the members of a restricted group find themselves placed in particular circumstances. For example, participants are put in a situation where there is a concentration of time and space as in a role-playing game or a need to explain their representation by following, in a limited time, a methodological conceptualization framework such as ARDI (actors, resources, dynamic, interactions), which exacerbates their interactions. Of course, exchange also happens without a commodian in attendance, but it is very difficult to collect precise information *a posteriori*.

The following analysis focuses on the facilitation of sessions of the role-playing game, which provide the best informed collective key moments in a ComMod process.

In this game of interactions, emotions can be provoked and the facilitator is obliged to deal with them in order to focus the attention of the group on performing the underlying task. The analysis of logbooks and canvases shows that the facilitator is rarely alone when animating the group of participants during role-playing game sessions. The facilitation team comprises a role-play master, technical assistants and observers and can vary in size from 2 to 13 people but, in most of the cases, a buddy system is used for facilitation.

This facilitation structure is explained by the format of the role-playing games, especially the spatial arrangement required. Thus, half the game sessions take place in areas where not all the players are together (e.g. the villages and irrigated perimeter in Njoobaari) or some provide several game areas for simultaneous use in the same venue (e.g. private property, community area and town hall in ButorStar, forest and forester's office in SylvoPast).

The reason for this lies firstly in the multiple functions carried out by the facilitation team. Figure 2.4 presents the functions undertaken by the facilitation group according to the 10 major categories defined in the ComMod role-playing game design documents (Étienne *et al.*, 2008a).

'Invite the participants' or 'record the actions' are the only two functions that stand out from those taken from a bibliographical analysis of the four main roles taken on by socio-cultural or participative approach facilitators (see above).

Participants are identified and invited with partners whose legitimacy is recognized by all the others. This is to try to ensure that they are the most relevant participants in terms of the objectives of the game session and, more widely, the companion modelling approach. This explains why the game sessions are mostly run by a commodian and another status facilitator (e.g. lay, academic, expert or institution).

Given the multiple interactions between the players and the variety of information to be processed (and recorded), managing and analysing a role-playing game calls on a large number of functions that a single facilitator is incapable of performing. It is, however, essential for the success of the exercise in collective reflective thinking. It also depends on scientific needs as the scientific community uses these recordings for analysis, evaluation and confrontation (see Box 2.2).

These various roles played by the facilitator are converted into a set of principles in terms of his stance. Their goal is the constitution of an 'us' conveying the cohesion of the group. They attempt to create an atmosphere of mutual respect, a user-friendly ambience and a climate of 'psychological security'. The facilitator does not preside. They propose, suggest, invite and consult the participants who have room for manoeuvre in interacting

in a framework defined by the game rules or by the structure of the method used. They do not judge. They thus develop their abilities based on situations of interaction between the players. In so doing, the facilitator works horizontally, not vertically, to develop reflective thinking drawing on collective expertise where, together, the individuals apply themselves to resolving a problem.
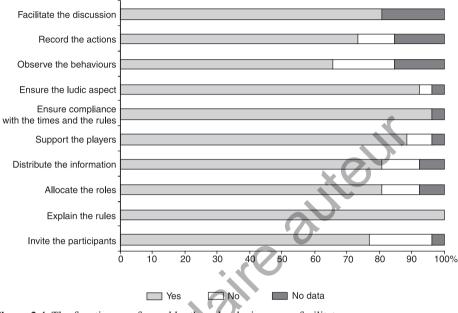

Figure 2.4. The functions performed by the role-playing game facilitators.

In reality, in the companion modelling approach, the design and simulation phases are those where collective key moments feature the most. These particular moments are when points of view are exchanged, opinions aired, actions simulated and so on, elements which all subsequently serve to support the collective reflective thinking. Analysing the evaluations shows clearly that the collective key moments play a fundamental role in the dynamics of collective action and the learning acquired during the companion modelling process (see Chapters 6 and 9).

Facilitation techniques and methods used in the intervention device

Now, we turn to the facilitation of the entire approach.

The range of facilitation techniques used throughout the companion modelling approach as a whole is relatively small. Little information is currently available with which to analyse facilitation techniques. It has only been possible to analyse seven case studies for their facilitation techniques. It emerges that the facilitators use various methods in line with the stage of group dynamics. We present here the most general case, in the knowledge that there are of course context-related variations.

During the ComMod group design stage, the facilitator's methods are to encourage the expression of viewpoints and stimulate the opinions of project sponsors to outline their

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Box 2.2 – Facilitation of the role-playing game in Njoobaari.

Description of the game

In this role-playing game, 12 farmers, each a manager of one plot, simulate a simplified rural operation in order to produce two varieties of rice in an irrigated perimeter. The irrigants are organized into two groups of farmers with a person in charge. Each group is in charge of managing the irrigation of a watercourse. Two watercourses are represented in the irrigation scheme. One pumping station supplies water to each watercourse. Players are divided into two villages, with irrigants from both groups. The social interactions for the exchange of work or credit are organized according to social status. The play area is divided into two, one hidden from the other. The first one represents the villages and the second the irrigated scheme. In the village area, players draw 'occasion' cards at random at each round of play, which authorizes them to go to the irrigated scheme area or not. In the second area, players can decide activities on their plot. The limited water resource, the different objective of intensification of rice production, their presence or not in the perimeter area, the different loan payment strategies, etc., create tension in the perimeter and the farmers have to work together to deal with it.

Facilitator's functions

Players are invited by a resource person belonging to the irrigated system. This person sponsors the ComMod approach. He invites farmers in accordance with the objectives of the approach he has explicitly requested: to heighten farmers' awareness of the consequences of a lack of reimbursement of collective loans and the problem of social organization of agricultural production in the irrigated system. Two persons are necessary to facilitate, one in each area. Observers are also present. In the village area, the first facilitator draws cards at random for the players. These cards give them the element of their role: goal of production, social status or repayment behaviour rules. They explain the rules. They take part in recording the activities the players want to carry out in the irrigated scheme before drawing the occasion cards. They supervise to ensure the rules of exchanging work or credit are respected. In the irrigated scheme, the second facilitator presents the level of water for each plot after the activities made by players during the previous round. An abacus familiar to everyone is used to calculate the quantity of water allocated to each plot according to the number of plots irrigated at the same time on the same watercourse. They register the activities really performed on each plot. They note the time so that negotiations about water allocation do not overrun the schedule. A camcorder is use to record the interactions between players in the irrigated area. Moreover, the facilitators have to listen to players and defuse any crisis that could happen, for example, when an agreement on water allocation previously established is not respected. In so doing, they maintain the playful atmosphere. Lastly, during the debriefing, the facilitation team organizes the discussion and regulates the contributions so that every player can express themselves. The facilitators precise or reformulate the opinions and viewpoints expressed. They put in perspective the actions and interactions that occurred during the session (relying on recorded data). In so doing, they help the collective reflection to facilitate the passage from learning acquired during the game session to the real situation.

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expectations as far as possible for the companion modelling approach. Brainstorming or brainwriting (normally using post-its) are two of the most used techniques, most frequently combined with slide show presentations. In the brainstorming sessions, the problem to be raised must be simply and clearly stated by the facilitator. They then give the group the floor for a limited period. Creative, original and incongruous ideas must be encouraged. It is forbidden to criticize the ideas expressed. The facilitator lets people speak as and when required, reformulates certain confused or misunderstood ideas and

produces interim summaries. The main goal of brainstorming is to list options. For the brainwriting session, each individual writes his ideas regarding the question asked by the facilitator on a separate card. After a few minutes the cards are exchanged and read and each person adds a new idea. The aim is to list the options in a more structured fashion than in brainstorming. Although defining the subject or even the question giving rise to a companion approach is in construction, it is rarely formalized at this stage. The contract between the various sponsors is raised but not systematically formalized in writing. The structure of the agreement is, however, discussed at length in order to identify each party's undertakings as comprehensively as possible.

Then, with the formation of the group in the awareness-raising phase, the facilitators tend more to seek to pass on information on the subject and to explain the thinking behind the formation of the group of stakeholders in the companion modelling approach. Presentations at this stage basically rely on explanatory methods, such as a picture, paperboard or slide show to excite the visual and auditory senses of participants.
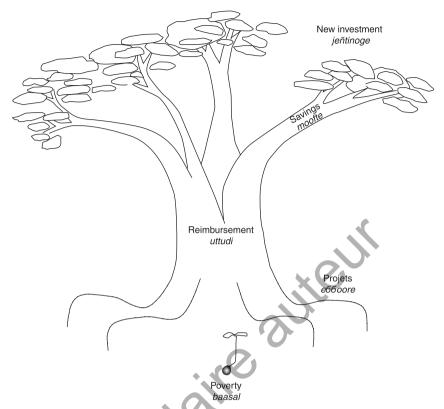
Once through this stage, the techniques used as the group develops or has even reached maturity seek to encourage exchanges between participants. However, these exchanges must be rich and structured, that is the reason why facilitators resort to brainstorming and round table sessions or developing mindmaps[4] using formalization methods described in Chapter 3. The role-playing game occupies a special position in the facilitation techniques used as it is both the result of a conceptualization/scriplet process (during which several facilitation techniques can be used) and the special moment when participants embark on the situation simulation exercise. It is activated as a long-term/ simulation exercise to create surprise, encourage creativity and interaction and even defuse potential sources of conflict.

Other more marginal methods have also been used, such as the palaver or problem tree in Senegal (Figure 2.5), the land coat-of-arms in Madagascar, facilitation games in Bhutan (Figure 2.6) or photolanguage[5] in Thailand or at Tarawa, which can be compared with the logical phrases used to bridge the gap between the ARDI interaction diagram (see Chapter 3) and model implementation.

There is seemingly no standard combination of facilitation techniques apart from using role-playing games in the majority of companion modelling experiments. The most important seems to be the adaptive nature of the facilitation and, therefore, the mobilization based on contextual needs of a particular technique. The result is a desire for adaptive facilitation, with more emphasis placed on matching the use made of tools to the companion stance than on reifying tools. However, questions can be asked over the potentially substantial improvement from greater familiarity with facilitation techniques, especially in terms of interaction between participants expressing viewpoints, whether or not they are appropriate for taking power plays into account or more widely to become more familiar with the social effects of the facilitation.

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[4] Each individual writes his ideas on a card. The cards are pinned to a panel on the wall. The ideas are then put in order. The aim is to produce a structured list of options.

[5] The facilitator uses a visual medium to assist expression. He presents illustrations haphazardly (e.g. landscapes, personalities, words, expressions, sketches, etc.), then states the theme of the exercise. Each participant chooses one or more illustrations and must explain what comes to mind for three to five minutes. At the end, the facilitator produces a summary, noting the variety and wealth of ideas, concentrating on the interesting ideas and correcting any errors. The aim is to produce a structured list of options.

New investment
jeñtinoge

Savings
moofte

Reimbursement
uttudi

Projets
eɓɓoore

Poverty
baasal

Figure 2.5. Palaver tree – Village perception of credit/debt (*ñamande)* and how it has changed, Wuro Madiu, Senegal, 2002.

Formulating the social demand or taking over a clearly formulated social demand, facilitating groups where emotions can run high, having the necessary scientific knowledge to fuel the debates or mobilizing it outside, helping to modify the perception of other individuals' viewpoints, analysing and inputting the social context of the intervention – all these skills are seemingly required to facilitate a companion modelling approach based on the fundamental principles. The commodian does not claim to be 'omni-skilled'. They surround themself with individuals with complementary skills when faced with the complexity of facilitating a ComMod approach. They and the members of the facilitation team will build up their legitimacy to intervene in the social and ecological system studied during the process. The commodian must, however, possess two essential skills to initiate the approach and take it to a successful conclusion: familiarity with the principles of the approach and the ability to demonstrate drive in supporting and animating the group that is developing the approach. They must be aware that the results of their facilitation efforts will be interpreted, taken over or even hijacked and improved by the stakeholders.

Figure 2.6. Facilitation game between the Rhadip (sedentary farmers) and the Merek (nomadic yak herdsmen), Radi, Bhutan, 2005.

An intervention stance of the commodian that cannot be naive

The participative approach of companion modelling refers to a comprehensive approach of social reality, which involves giving meaning to the practices, actions and projects of communities so that they can become part of the joint perspectives of sustainable development. It presupposes at least bringing together a multiplicity of heterogeneous bodies of knowledge (i.e. scientific, practical, managerial, expert or lay), which are expressed, questioned and answered to define together the conditions for intervention and development of a common knowledge. It involves helping to produce collectively a problem orientation that is not the sum of all the approaches but the product of a global conception of the question being dealt with, mastered by all participants in the approach (Daré *et al.*, 2007). This ordered levelling is facilitated by producing intermediate objects like glossaries, semantics or model formalism as its assumed abstraction can make its appropriation difficult by other social stakeholders who have played little part in its development or who are far from academic culture. We are here faced with the following paradox: the production of intermediate objects to formalize the approach and make it accessible to all is a mandatory stage in multi-disciplinary and multi-stakeholder

approaches, but it could be a source of exclusion of the stakeholders with least cultural and symbolic capital. It would thus risk a facilitation that does not result in collective emancipation, giving participants the chance to blossom, aiming to preserve certain hierarchical social structures. How do the interpersonal skills of the commodian and the know-how we have just described limit this paradox?

In terms of stance, remember that two fundamental principles are the recognition of the multiplicity of legitimate viewpoints and clarification of hypotheses to render the bodies of knowledge accessible or even intelligible to all. Recourse to abstraction can seem difficult to access. Unified modelling language (UML) or ARDI formalism (presented in Chapter 3) have, however, been favoured as they seem the most capable of levelling out the constituent elements of each individual's representations as they involve a representation in terms of relationships and objects (in the most simplistic proposal). This remains far from easy as it requires a facilitator familiar with these tools and capable of reformulating the group's proposals to dissect them in depth. The development of the ARDI method by some commodians (Étienne, 2006; Étienne *et al.*, 2008c) has responded precisely to others' concern over potential problems faced by non-computer scientists in the use of UML. The ARDI method sees itself as closer to the spoken language by producing logical phrases before transcribing them into a system of computerized relationships. It has since proved advantageous in multiple intervention situations. Recourse to role-playing games also participates in this logic of producing a viewpoint intelligible to stakeholders. We have thus witnessed a move from the computerized simulation system and role-playing game to a simplification of rules, so that the operating rules of the system can be understood by players not involved in the design phase. Computerization is not always essential; simple cross-ruling in a table and game rules can sometimes create an intermediate object, a discussion medium, of sufficient relevance to the question being dealt with. However, we must not be fooled and it is clear that despite all the efforts to clarify hypotheses, rules and so on, recourse to a third-party object can sometimes cause confusion and, therefore, trigger the paradox described previously. We can, however, be aware of this and still apply a principle of reflexivity to our own approach and thus seek to limit it.

To state our position even more clearly, we now return to the criticisms of participative approaches and facilitation as to the lack of knowledge of the intervention context. It would be easy to imagine facilitating a companion modelling approach with no real knowledge of the system in which the commodian is intervening. The danger here would be to boost local conservatism, whereas the approach aims for movement and support for social dynamics. It is true that in such a situation the expertise mobilized, because it aims to make expressing the various viewpoints present easier, could further the exclusion of absent third-parties, thereby boosting the position of elites or invited stakeholders. The question then is to know whether the commodian adopting this position remains in line with the stance and the ComMod Charter. In practice, when intervening on a site, the commodian more often than not analyses the context so that they can position their intervention and influence the choice of members of the ComMod group set up to carry out the experiment (see Chapter 4). In so doing, the iterative nature of the approach, the development of observation crossed with the expression of multiple viewpoints at various moments with different facilitation techniques encourage the identification of major shadow areas in knowledge and restricts the incompleteness of the system represented.

However, we are aware that the discipline of each facilitator has a major influence on the perception of shadow areas, hence the advantage in developing unified, multi-headed and cross-disciplinary facilitation.

As part of the applied research, the researcher also frequently finds himself responding to economic or political questions and measuring the issues and consequences of a critical positioning with respect to the social and economic model founded on the utopia of social progress via growth (or the market). They are responsible for the theories they produce and are of necessity committed to the social life. They cannot cut themselves off from using their scientific work. They are inevitably engaged in producing and structuring the world they are studying and in permanent dialogue with the constituent stakeholders. They construct society at the same time as they attempt to understand it. They cannot therefore be neutral. When explicit reference is made to the support and co-construction of interpersonal skills and know-how, they must of necessity cast an eye over the effects induced by the participation of social stakeholders specifically convened.

Lastly, the companion modelling approach is not an even deal; it intervenes in the social dynamics and can modify them. Even further, it can arouse social expectations, particularly by encouraging the emergence of consultation arenas, by allowing the ignored interests of 'social trainees' to find expression or by altering the symbolic field of the circulation of power. At the service of human communities, researchers can only stay for a limited time and the support periods do not coincide with operations. What happens therefore when the commodians leave the field? How are the expertise and interpersonal skills required to keep the facilitation going transferred? Faced with the complexity of the facilitation due to the combination of all the functions assigned to the designer-facilitator of the approach and even the design and simulation/game workshops, it seems that interpersonal skills must reign supreme. To continue the companion modelling approach under an action programme rather than in a research process, the future designers-facilitators of the approach must first be identified and trained. The problem with this training is the transfer of the stance, not the transfer of the facilitation techniques, which can be reinvented depending on the fields to suit the question being addressed. The charter is only one stage. The methodology guide is another (see the Appendix). Scientific training programmes have been achieved in the main until now. However, in all circumstances, close links with a commodian must be maintained so that the future designer-facilitator can learn by doing, develop through experience and thus acquire those interpersonal skills that take precedence over know-how (see Chapter 11).