



**Queensland University of Technology**  
Brisbane Australia

This is the author's version of a work that was submitted/accepted for publication in the following source:

[Bredillet, Christophe](#) (2005) Some reflections about P2M : the place of the mirror. In *International Association of Project and Program Management, IAP2M*, Tokyo, Japan, pp. 11-21.

This file was downloaded from: <http://eprints.qut.edu.au/49504/>

**Notice:** *Changes introduced as a result of publishing processes such as copy-editing and formatting may not be reflected in this document. For a definitive version of this work, please refer to the published source:*

# Some reflections about P2M: the place of the mirror.

Professor Christophe N. BREDILLET  
PhD, D.Sc, MBA, Ingénieur EC Lille, CPD Level A, PRINCE2 Practitioner, CCE

Professor of Strategy, Programme & Project Management  
Associate Dean, Head of Postgraduate Programmes  
ESC Lille, Avenue Willy Brandt, 59777 Euralille - France  
Email: c.bredillet@esc-lille.fr

## Introduction

The purpose of this paper is to provide some insights about P2M, and more specifically, to develop some thoughts about Project Management seen as a Mirror, a place for reflection..., between the Mission of organisation and its actual creation of Values (with s: a source of value for people, organisations and society). This place is the realm of complexity, of interactions between multiple variables, each of them having a specific time horizon and occupying a specific place, playing a specific role.

Before developing this paper I would like to borrow to my colleague and friend, Professor Ohara, the following, part of a paper going to be presented at IPMA World Congress, in New Delhi later this year in November 2005.

*“P2M is the Japanese version of project & program management, which is the first standard guide for education and certification developed in 2001. A specific finding of P2M is characterized by “mission driven management of projects” or a program which harness complexity of problem solving observed in the interface between technical system and business model.” (Ohara, 2005, IPMA Conference, New Delhi)*

*“The term of “mission” is a key word in the field of corporate strategy, where it expresses raison d’être or “value of business”. It is more specifically used for expressing “the client needs” in terms of a strategic business unit. The concept of mission is deemed to be a useful tool to share essential content of value and needs in message for complex project.” (Ohara, 2005, IPMA Conference, New Delhi)*

*“Mission is considered as a significant “metamodel representation” by several reasons. First, it represents multiple values for aspiration. The central objective of mission initiative is profiling of ideality in the future from reality, which all stakeholders are glad to accept and share. Second, it shall be within a stretch of efforts, and not beyond or outside of the realization. Though it looks like unique, it has to depict a solid foundation. The pragmatic sense of equilibrium between innovation and adaptation is required for the mission. Third, it shall imply a rough sketch for solution to critical issues for problems in reality.” (Ohara, 2005, IPMA Conference, New Delhi)*

*“Project modeling” idea has been introduced in P2M program management. A package of three project models of “scheme”, “system” and “service” are given as a reference type program. (Ohara, 2005, IPMA Conference, New Delhi)*

If these quotes apply to P2M, they are fully congruent with the results of the research undertaken and the resulting meta-model & meta-method developed by the CIMAP, ESC Lille Research Centre in Project & Program Management, since the 80's.

The paper starts by questioning the common Project Management (PM) paradigm. Then discussing the concept of Project, it argues that an alternative epistemological position should be taken to capture

the very nature of the PM field. Based on this, a development about “the need of modelling to understand” is proposed grounded on two theoretical roots. This leads to the conclusion that, in order to enable this modelling, a standard approach is necessary, but should be understood under the perspective of the Theory of Convention in order to facilitate a situational and contextual application.

### **Project Management as a Complex Integrative Field**

As professor and director of the post graduate programmes in project management as well as a practicing consultant, I am constantly surprised by the way the world, i.e. organisations, universities, students and professional bodies, sees project management: as a set of methods, techniques, tools, interacting with others fields – general management, engineering, construction, information systems, etc. – bringing some effective (?) ways of dealing with various sets of problems – from launching a new satellite to product development through to organisational change. The problem being that most of the tools, techniques, and methods involve a conceptual approach based on a specific paradigm, which is mostly, in project management, a positivist one.

We need to question whether this is the appropriate paradigm for the kind of project management, which claims to be able to deal with complex problems that do not have clear or straightforward solutions. The apparent lack of a theoretical foundation, the lack of a clear epistemological position in most of the research to date and the lack of a clear paradigm in most of the literature, seem, from my perspective, to be a real barrier to effective understanding and communication of the true nature of project management. This leads to nonsense, to a dynamic, a fad, where hype, advocacy of one’s own practice is the rule, reinforced by a lack of critical thinking by the practitioners, who complacently accept seemingly reasonable answers, even if they lead to major failures. It is often convenient, and lucrative to reinforce accepted belief systems built on many centuries of thinking based on the positivist paradigm. Positivism has led in some cases to over-simplification – one problem equals one solution – and in many cases has obviated against recognition of the complexity and of the relativity of the world. The place of project management within most universities and as a research field shows that it is not yet considered as a discrete discipline. In most universities it is treated as a sub-discipline of construction, engineering, IT or business faculties. At the same time it is claimed to be a trans-functional discipline. This situation itself contributes to a reinforcement of the positivist paradigm that pervades teaching, research, and practice of the discipline.

Kurtz & Snowden (2003) question the three basic assumptions that pervade the practice and the theory of decision-making and thus the translation of the organisations mission into practice: assumptions of order, assumption of rational choice and assumption of intentional capability:

- *"The assumption of order: that there are underlying relationships between cause and effect in human interactions and markets, which are capable of discovery and empirical verification. In consequence, it is possible to produce prescriptive and predictive models and design interventions that allow us to achieve goals. This implies that an understanding of the causal links in past behaviour allows us to define “best practice” for future behaviour. It also implies that there must be a right or ideal way of doing things.*
- *The assumption of rational choice: that faced with a choice between one or more alternatives, human actors will make a “rational” decision based only on minimizing pain or maximizing pleasure; and, in consequence, their individual and collective behaviour can be managed by manipulation of pain or pleasure outcomes and through education to make those consequences evident.*
- *The assumption of intentional capability: that the acquisition of capability indicates an intention to use that capability, and that actions from competitors, populations, nation states, communities, or whatever collective identity is under consideration are the result of intentional behaviour. In effect, we assume that every “blink” we see is a “wink,” and act accordingly. We accept that we do things by accident, but assume that others do things deliberately."*

I concur with them and would argue that project management needs to be understood as a complex discipline because it aims to deal with complex reality. In mathematics, since Ashby (1958) and the law of requisite variety, it is well known that to control a complex system with  $n$  dimensions, you need an  $n+1$  dimensional system. The available control variety must be equal to or greater than the disturbance variety for control to be possible. A number of conclusions can be derived from information theory, or from games theory; in a communications system, to transmit a message and

receive it successfully, the coding/decoding variety must exceed the interference variety. In a game the variety of moves you have available must be greater than the variety of moves available to your opponent if you are to be able to win. This implies that it is important to plan for many states (= situations) and many misunderstandings (see below the role of conventions). As part of the key resulting concepts and principles, the following can be mentioned as very pertinent to the management of complex situations (programs & projects) topic:

- The Conant-Ashby Theorem: Every good regulator of a system must have a model of that system. Implication: The principle prompts one to think through and create a model of what you are teaching / managing / guiding.
- The Darkness Principle: Even though a system is never completely known, it can be managed effectively (black box theory)
- The Redundancy of Resources Principle: To minimize the effect of disturbances or noise, the system requires backup systems of critical resources (human and machine) in order to maintain stability. Implications: Plan actions before disturbance or noise happen, because they will.

Project management also needs to be simple, as far as its principles are concerned (again, see below the role of convention): like white light is transformed into multiple colours through a prism, project management applications may be seen as coming from some general principles. Project management needs to integrate both quality (To Be) and quantity (To Have). Project management is a process of naming, of revelation, of creation. Thus, my purpose is to defend the proposition that project management has a "raison d'être" in itself; it is both a discipline and an art and contributes to a better understanding of the integrative epistemological position proposed, in which is the very nature of project management.

### **Scrutinizing the concept of project**

From one perspective (Leroy, 1994), the concept of project is generally approached by listing its intrinsic characteristics. I have selected three definitions, chosen to demonstrate the range of different perspectives in the approaching of the project concept:

- *"a project is a temporary endeavour undertaken to create a unique product or service"* (PMI, PMBOK® Guide, 2000), pointing out the instrumental perspective;
- *"an endeavour in which human, material and financial resources are organised in a novel way, to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives."* (Turner, 1993), putting forward the cognitive perspective;
- *"a project is a whole of actions limited in time and space, inserted in, and in interaction with a politico-socio-economic environment, aimed at and tended towards a goal progressively redefined by the dialectic between the thought (the project plan) and the reality"* (Declerck et al, 1983, 1997), illustrating the political perspective.

These different perspectives illustrate the polysemic nature of the concept of project (Boutinet, 1996). This polysemic nature is at the source of two underlying visions which have evolved with the development of project management.

On the one hand, it is interesting to note that the development of project management was accompanied by the constitution of codes of practice and this according to two plans:

1. First, in the plan of the people, from the builders of cathedrals to the National Aeronautics and Space Administration (NASA) 100 rules of "the good" project manager, while passing by the processes of certification of the people, this being connected in the majority of the cases to an "initiation rite" (and rite comes from the Sanskrit rita = order), where theoretical knowledge is not enough, even if essential, but must be accompanied by recognition of the peers and of the practice;
2. Then, in the plan of the processes of management of the trajectory of the projects by the organisations, with the appearance of the standards, either with descriptive or prescriptive feature. The underlying vision is, here, a positivist one: experiences and practices lead to standard and rules, standard and rules lead to theories, which lead to paradigms, and all

these, according to certain assumptions, are used as a basis of code of practices, bodies of knowledge.

On the other hand, through projects, man builds reality and as highlighted by authors like Declerck et al (1997), the management of projects by its mode of deployment within the ecosystem project/firm/context implies a systemic vision, "*an "intelligent" action, "ingenium", this mental faculty which makes possible to connect in a fast, suitable and happy way the separate things*" as stated by Le Moigne (1995), quoting Giambattista Vico (1708). Thus, the evolution noted in the use of project management and/or management by projects (Giard & Midler, 1993) and its structuring characteristics suggests a constructivist vision (Cognitive Constructivism with Jean Piaget and Social Constructivism with Lev Vygotsky).

### **Tensions and paradoxes in project management**

These two visions appear to be consubstantial with the concept of management of projects underlining the "*tensions and paradoxes in project management*". Boutinet (1997) shows that the project model can constitute a suitable reference for the management of organisations, s, through, them it is possible to create and to innovate by using several parameters, which they organise in a paradoxical way. Not being conscious of this often involves us toward a drift of totalitarian or technicist project or toward simplification, the vulgarizing of projects brought back to our daily life. Current organisations in the mobility of our post-industrial culture resort readily to the figure of the project as a model of management: industrial companies, social or educational establishments, services, etc. This recourse seems suitable insofar as we move in complex and fluctuating environments which confront us to create and innovate, while always resorting to a plurality of parameters; to reason in terms of objectives is to be located from the unidimensional point of view, that which we knew; to reason in terms of projects, it is precisely to take into account this multidimensional thought made of a plurality of components take into account; however those by the force of the things often maintain between them the paradoxical relations. Indeed to speak about paradox is deliberately to fit in a way of thinking uncommon, founded on a non-traditional logic, that of unexpected, 'fuzzy' and uncertainty in particular.

This way of thinking is completely congruent with our time of post-modernity marked by the advent of the post-industrial culture; we have now left the universe of the certainty, the constants, the determinisms and the laws to enter that of fluidities and paradoxes. Doesn't the currently dominant reign of the communication networks represent an emergence, impossible to circumvent, of the plural oppositions which make us initially have a presentiment of an environment conditioned by the mode of its diversities and its contrasts? The project embodies completely this paradoxical reality since it exists only to disappear as soon as it is carried out! To speak about the non-traditional paradox of logic is to take a stand in opposition to traditional formal logic which has dominated until the end of the industrial age This traditional logic was concerned with coherence and haunted by the principle of non-contradiction; discipline of the mind and controlled sets of steps. This logic can, however, twist the rational one in the direction of rationalizations, artificially giving to reality desired intelligibility. The increasing complexity of our environments means that the opportunities to use this traditional kind of logic are increasingly random; the relevance of the recourse to the paradox today is precisely related to the fact that it constitutes a suitable figure to think through the 'fuzzy', uncertain, and even the strangeness of our intentions, that is, the heuristic framework of our projects.

These considerations on the different perspectives embodied in the concept of projects, on the polysemic nature of the concept, and consequentially on the underlying positivist and constructivist visions consubstantial to the concept of management of projects and its paradoxical and non-traditional logic, lead me to present an epistemological position on project management.

### **An epistemological perspective for project management**

After Polanyi (1958), I propose an alternative epistemological perspective both to positivism and constructivism. I have no intention to separate personal judgment from scientific method. I argue that, especially in project management, knowledge creation and production has to integrate both classical scientific aspects and 'fuzzy' or symbolic aspects. A "reality" can be explained according to a specific point of view and also can be considered as the symbol of higher order (Guénon, 1986) and a more general reality (example, a two-dimensional form can be seen as the projection on a plan of a n-dimensional figure). I argue that the "demiurgic" characteristic of project management involves seeing

this field as an open space, without "having" (Have) but rather with a "raison d'être" (Be), because of the construction of "Real" by the projects. It could be considered to be a fundamental explanation of the pre-paradigmatic nature of this field (Kuhn, 1970): the dominant paradigm, source of well established theory(ies) is NOT to find, the deep nature of project management implies this paradox of being built on moving paradigms reflecting the diversity of the creation process by itself.

This field is thus composed of both quantitative aspects (Have), dependent upon the positivist paradigm, where people have few degrees of freedom (operational research in network optimization, cost engineering, statistical methods, bodies of knowledge, application of standards, best practices, code of ethics ... all these are seen as the truth), and qualitative aspects (Be), dependent upon the constructivist paradigm where people have many degrees of freedom (organisational design, learning, knowledge management, change management, systemic approaches, contextualisation of the life-cycle, meta-rules, etc.), some of these aspects being linked together: for example the creation and evolution of standards seen from the Theory of Convention (social construct) and their application (positivism). The problem is that, most of the time, people are using methods and tools without any idea of the validity of the underlying assumptions.

Thus, my vision for project management would be one of an integral function: the knowledge field is made up of differential elements; each of them able to be defined, for example cost control, scheduling, communication, quality, information system, temporary group, etc. Seen as a whole, it is a transition to the limit, and in mathematics the result of an integral is both quantitatively and qualitatively more than the sum of the parts. In other words, it can be called a system effect: parts A, B and C forming a system S, keeping some of their properties and potential performances, losing some others, but gaining some entirely new performances.

From this point of view of the conceptual field of management of projects, like Le Moigne (1995) we could argue that there is *"inseparability of the knowledge and its representation understood in their distinctable activity, the intentional experience of the knowing subject and the groping construction of the subject representing knowledge, this undoubtedly constituting the strong assumption on which are defined teachable knowledge today, both scientific and ordinary"* (See below the role of symbols in Theory of Convention).

So for me, project management as a knowledge field is both an art and a science, in their dialectic AND integrative dimensions (close to the "critical-rationalist" and "interactionist" approach of Popper), and thus according to the two epistemological approaches:

- The positivist epistemology (materialist – quantitative – Have): *"the relation of science to art may be summed up in a brief expression: from Science comes Prevision, from Prevision comes action"*. (Comte, Positive Philosophy, Chapter II, p 43. 1896)
- The constructivist epistemology (immaterialist – qualitative – Be), with two hypotheses of reference as underlined by Le Moigne (1995):
  - The phenomenological hypothesis – the cognitive interaction between the object or the phenomenon to be known and the subject knowing forms at the same time the knowledge of the object (in "organising the world") and the mode of development of knowledge by the subject (in "the intelligence organising itself"). This hypothesis associates to the strict design knowledge (the cognizable reality is a phenomenological reality, which the subject experiments) an active conception: the knowledge which the subject builds by its experience organises simultaneously the method of construction of this knowledge, or his or her intelligence.
  - The teleological hypothesis: the intentionality or the finality of the knowing subject, according to its decisive role in the construction of knowledge (phenomenological hypothesis), must be taken into account.

Most of the works on organisational learning, learning organisations, knowledge management, knowledge-creating organisations, etc., are based on a traditional understanding of the nature of knowledge. We could name this understanding the "positivist epistemology" perspective since it treats knowledge as something people, teams, and organisations have. But, this perspective does not reflect the knowing found in individual and team practice, knowing (understanding) as an "intelligent" action, "ingenium", as stated by Le Moigne (1995), in calling for a "constructivist epistemology" perspective.

The "positivist epistemology" tends to promote explicit over tacit knowledge, and individual knowledge over team or organisational knowledge.

This integrative epistemological approach for project management suggests that organisations will be better understood if explicit, tacit, individual and team/organisational information /knowledge /understanding are treated as four distinct forms (each doing work the others cannot), and if information, knowledge and understanding are seen as inseparable and mutually enabling. Thus, *"Information is descriptive; it is contained in answers to questions that begin with such words as what, which, who, how many, when and where. Knowledge is instructive; it is conveyed by answers to how-to questions. Understanding is explanatory; it is transmitted by answers to why questions. To understand a system is to be able to explain its properties and behaviour and to reveal why it is what it is and why it behaves the way it does"* (Gharajedaghi & Ackoff, 1984).

In the next part of the paper, I am introducing the theoretical roots of the design of a meta-model. A meta-method aims at providing a contextual and situational model for project management. Most of these developments are the results of research undertaken as part of the CIMAP Research Centre – Groupe ESC Lille, and are grounded on the former works of the founders Declerck and Debourse (1983, 1997).

### **“Modelling to understand” that is to do ingeniously!**

(See above notion of “Ingenium”)

How to cope with these various complex management situations? Acting in complex situations involves “Modelling to understand” that is to do ingeniously. (Le Moigne, 2003)

According to a complexity and systemic perspective acting and learning are inseparable. This involves having information, tacit or explicit knowledge, as well as understanding of the context, the different parameters and variables, their interaction and conditions of change. Thus, we can consider that there is a systemic and dynamic link between mission, management of program & project, information, knowledge, learning and understanding in a given context and under given conditions.

This meta-modelling approach is well grounded in sound theoretical organisational frameworks. With a project management perspective, we can say the meta-method is about designing a contextual structure that:

- Provides a privileged place for individuals, project managers and stakeholders to act and learn and such learning in project environment needs to integrate the two perspectives, as there is a need for a blend of creative or exploratory learning and application or exploitative learning (Boisot, 1998, p. 116). Having in mind the need for efficiency and effectiveness, a project team acts as a temporary dissipative structure (Declerck, R., Debourse, & Declerck, J., 1997, p. 207), generating first entropy (that is knowledge) creating knowledge with many degrees of freedom, then applying it (entropy reduction by reduction of complexity, Boisot, 1998, p. 67-68) in the former stage of a project.
- Facilitates this praxis through a specific meta-method, one of the underlying paradigms being that there is a co-evolution between the subject/actor and his or her environment. This involves inseparability between the subject and the object in this observation-action process. This observation-action is related to an epistemo-praxeologic cognition through an observational chain (perception of what is true or wrong – epistemological subjectivity), a decision chain (decision made founded or unfounded – pragmatological subjectivity), and an effect chain (action fulfilled feasible or unfeasible – praxeological subjectivity). This epistemo-praxiologic cognition involves both partial subjectivity AND partial objectivity, congruent with our previous alternative epistemological position.
- Enables to generate a specific convention (configuration of order) and some kind of stability to cope with uncertainty and ambiguity in a given project's complex situation. The meta-method helps to create a coherent or dissonant framework of symbols, promoting dynamic management practices which are creating adequate initial conditions for decision-making (and thus performance), and transparency (and thus accountability) while being conscious of rational voids.

It is worthwhile to write few words about the underlying theories in which is rooted any metal modelling approach.

### Meta modelling roots

Two main theoretical areas, aligned with our epistemological position exposed earlier in this paper are considered here. This meta-modelling approach is grounded on "N-Learning" vs. "S-Learning" dialectic, and a praxeological epistemology.

**N vs. S-Learning.** I am borrowing from Boisot (1998) a model grounded on an information perspective and Complexity science, a set of theories describing how complex adaptive systems work. For him (p. 34), knowledge assets emerge as a result of a two-step process, constituting the two distinct phases of the evolutionary production function: creating knowledge ("process of extracting information from data") and applying knowledge ("testing the insights created in a variety of situations that allow for the gradual accumulation of experiential data"). He defines an Information space (I-Space) according to three dimensions: codification (information codified/uncodified), abstraction (abstract/concrete), and diffusion (diffused/undiffused). The creation and diffusion of new knowledge occurs in a particular sequence (Social Learning Cycle – SLC, p. 59): scanning, problem-solving, abstraction, diffusion, absorption, impacting. Two distinct theories of learning, although not mutually exclusive, are introduced as part of identification of two distinct strategic orientations for dealing with the paradox of value (i.e. "*maximising the utility of knowledge assets compromises their scarcity, and maximising their scarcity make it difficult to develop and exploit their utility*", p. 90). In neoclassical learning (N-Learning) knowledge is considered cumulative. Learning becomes a stabilizing process. This approach may lead to excessive inertia and fossilization of the knowledge assets. In Schumpeterian learning (S-Learning), change is the natural order of things. Abstraction and codification are incomplete. "Knowledge may be progressive in the sense that successive approximation may give a better grasp of the underlying structures of reality, but it is not necessarily cumulative" (p. 99). S-Learning is more complex than N-Learning integrating both certainties and uncertainties, and requires an "edge of chaos" culture (p. 116).

**Praxeological epistemology.** One of the key understandings in project management is that learning and practice are integrated into praxis – praxeological approach (see above the notion of "ingenium").

Praxeology is "*The science of human action that strives for universally valid knowledge. In all of its branches this science is a priori, not empirical. Like logic and mathematics, it is not derived from experience; it is prior to experience. It is, as it were, the logic of action and deed.*" (Von Mises, 1976, Chapter 1 §6). Praxeology (early alteration of praxiology) is the study of human action and conduct. The name praxeology is root in praxis, Medieval Latin, from Greek, doing, action, from *prassein* to do, practice (Merriam-Webster Dictionary). The term *praxeology* was first used in 1890 by Espinas in "*Les Origines de la technologie*", *Revue Philosophique*, XVth year, XXX, p. 114-15. Praxeology is the study of those aspects of human action that can be grasped a priori; in other words, it is concerned with the conceptual analysis and logical implications of preference, choice, means-end schemes, and so forth. The basic principles of praxeology were first discovered by the Greek philosophers, who used them as a foundation for a eudaemonistic ethics. This approach was further developed by the Scholastics, who extended praxeological analysis to the foundations of economics and social science as well. In the late nineteenth century, the praxeological approach to economics and social science was rediscovered by Carl Menger, founder of the Austrian School. The term praxeology was first applied to this approach by the later Austrian economist Ludwig von Mises.

Along with his students (including Friedrich Hayek and Murray Rothbard), Mises employed praxeological principles to show that much existing economic and social theory was conceptually incoherent:

*"It is no longer possible to define neatly the boundaries between the kind of action which is the proper field of economic science in the narrower sense, and other action.*



*Acting man is always concerned with both "material" and "ideal" things. He chooses between alternatives. ...Choosing determines all human decisions. ...Out of the political economy of the classical school emerges the general theory of human action, praxeology. ...No treatment of economic problems proper can avoid starting from acts of choice; economics becomes a part, although the hitherto best elaborated part, of a more universal science, praxeology. Praxeology—and consequently economics too—is a deductive system. It draws its strength from the starting point of its deductions, from the category of action. Praxeology is a theoretical and systematic, not a historical, science. Its statements and propositions are not derived from experience. They are, like those of logic and mathematics, a priori. They are not subject to verification or falsification on the ground of experience and facts." (Von Mises, 1981)*

### **Concluding remarks: Standard as a Convention**

For the PMBOK® Guide 2000 definition: *"a standard is a document approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for products, processes or services with which compliance is not mandatory".*

As concluding remarks of this paper, I would like to give an alternate view of the principles and characteristics of what should be a standard in order to be congruent with the previous development and support the meta-modelling activity, heart of the creation of Value(s) in complex project management.

I have introduced in a previous paper (Bredillet, 2002) an alternative view of standardisation, mentioning the difficulties classical micro-economics poses in establishing a theory of standardisation that is compatible with its fundamental axiomatic are underscored. I have proposed to reconsider the problem by from the opposite perspective by questioning the theoretical base and by reformulating assumptions on the autonomy of the choice of the actors. The theory of Convention offers us both a theoretical framework and tools, enabling us to understand the systemic dimension and dynamic structure of standards seen as a special case of conventions.

Gomez and Jones (2000) outline the main characteristics of the Theory of Convention: starting with the notions such as "deep structure" (Giddens, 1986; Gersick, 1991, Schein, 1980) and "system structure" (Crozier & Friedberg, 1980, Senge, 1990, 1994), they adopt *"this viewpoint that a state of "un-enlightenment represents neither a failure nor a consequence of cognitive limitations, but rather that it has a social function, and that it exists because it is essential for the smooth running of relationships in society"* (Gomez & Jones, 2000, p. 697). They argue that it could, indeed, constitute a referential notion, making compatible individual calculations and social context, and allowing for their co-construction and co-evolution (Schumpeter, 1989).

Three main notions are discussed before they propose a definition of convention: uncertainty, "rationalization" and the process of justification of the behaviour to cope with uncertainty, and rational voids (systems of non-justified beliefs). The rational void is *"surrounded by a screen of information which both provides individuals with signals that they share the same assumptions, and also distracts their attention from questioning it"* (Gomez & Jones, 2000, p. 700). These signals are said to operate also as symbols.

So, what is a convention? A convention is a social mechanism that associates a rational void, i.e., a set of non justified norms, with a screen of symbols, i.e., an interrelation between objects, discourses, and behaviours. People acting according to a given convention refer to the same non justified criteria and take for granted the symbolic meaning of signals they receive. Convention is an archetype or "structure" in Levi-Strauss' definition, that is to say, "a set of formal relationships among the elements in a symbolic system which can be modelled" (Levi-Strauss, 1971, 1974).

More formally, the concept of convention can be described as follows (Gomez, 1994, p. 95).

- A convention eliminates a situation of uncertainty where the result of a decision or an action for an agent would be indeterminate by individual calculation alone.
- A convention is an evolutionarily stable (Sugden, 1989) element of regularity. It provides a justifying set of norms (the rational void), which makes justification of some choices

dispensable, but which gives them sense in the context of a screen of symbols, which relate objects, discourse, and behaviours to the same rational void.

- A convention is based on a shared belief. Five criteria, known as Lewis' conditions (Orlean, 1989; see also Lewis, 1969, p.42) are used to verify this: (1) There is general compliance with the convention. Those who comply are known as adopters. (2) All adopters anticipate that others will also comply (adopt). (3) Everyone prefers compliance with the convention to be general rather than less than general. (4) There could be at least one other alternative regular solution for the problem the convention exists to solve. (5) These first four conditions are common knowledge.

From this several important consequences can be drawn and discussed. Among the most important on which are based a meta-method seen as a "convention generator":

- "An individual always finds himself or herself within a conventional system of rationalization. An observed behaviour is not always in relation to all symbols. It is situated in the screen of symbols, which means that it is linked with some others behaviours or objects but not the totality of them. This notion of situation is crucial to understand the dynamics of conventions.
- Conventions are stable but not static patterns. Conventions evolve, modify themselves, and sometimes disappear.
- Within any convention, conformism allows individuals to escape the perils of uncertainty.
- Conventions are never completely isolated. If indeed an alternative provides a more coherent set of symbols, the individual can spontaneously escape ambiguity and potential uncertainty by behaving according to this one.
- The more numerous the symbolic signals received by an individual, the higher the probability of finding dissonant signals, and thus to be "attracted" by another convention. Learning plays an ambiguous role in this matter as even the organisational learning process (Argyris & Schön, 1978) can itself be either a new source of conformity and conservatism, when it leads to the recognition of only coherent symbolic signals, or a source of nonconformist behaviour when it allows an increase in the number of signals that the individual perceives and the probability of encountering dissonance.
- No one individual can change a whole convention, but that everyone, by acting on it and within it locally, contributes to its evolution. This gives precision to the role and the limit of managerial action in organisations. Managers are not planners and decision makers applying a supposedly pure rationality, as they are always included in a social environment which gives both sense and limits to their rationality. They do not choose to act in one convention over another, but rather, as individuals, to escape the inhibiting effect of uncertainty. Once again, for any individual, the fact that the diversity of conventions allows some room for doubt and ambiguity is paradoxically the fact which gives them some freedom for action.
- Convention highlights in particular the important task of symbolic management. This allows us to better understand that management practices can also be a way of creating coherence, or creating gaps between the hidden and the visible, which leads to dissonance. Management has the subtle task of creating the conditions for routinization and, eventually, deroutinization. In practice, the use of a conventionalist framework leads us to understand organisational situations rather than organisations as an abstract and static whole". (Gomez & Jones, 2000)

I hope to have contributed to a better understanding of P2M and demonstrated that it, as an integrative standard – the place of the Mirror between past and future, analysis and foresight, logic and paradigm (Ohara, 2005, IPMA Conference, New Delhi) – offers unique characteristics in the world of PM standards.

The main one is probably to contribute to transform Reality into Ideality!

Ordo ab chaos

## References

- Argyris, C. and Schön D. (1978). *Organizational Learning: A Theory of Action Perspective*. Reading: Addison-Wesley.
- Ashby, W. (1958). Requisite Variety and Implications for Control of Complex Systems. *Cybernetica* 1: 83-99.
- Boisot, M. H. (1998). *Knowledge Assets: securing competitive advantage in the information economy*. New York: Oxford University Press
- Boutinet, JP. (1996). *Anthropologie du Projet*, Paris, PUF 4<sup>th</sup> ed.
- Boutinet, JP. (1997). *Tensions et paradoxes dans le management de projet*, Institut du Management d'EDF et de GDF. Adresse URL : <http://im.edfgdf.fr/im/html/fr/bib/conf/tensions.htm>
- Bredillet, C. (2002). *Genesis and Role of Standards: theoretical foundations and socio-economical model for the construction and use of standards*. Proceedings of IRNOP V, Renesse, Zeeland, The Netherlands, May 28 - 31, 16 p.
- Comte, A. (1896). *Positive Philosophy*, Ch II, p.43
- Crozier, M., and E. Friedberg. (1980). *Actors and Systems*. University of Chicago Press, Chicago, IL.
- Declerck, R. P., Debourse, JP. and Declerck, J. C. (1997). *Le management stratégique: contrôle de l'irréversibilité*. Lille: Les éditions ESC Lille.
- Declerck, R. P., Debourse, JP. and Navarre C. (1983). *La Méthode de Direction Générale : le management stratégique*. Paris: Hommes et Techniques.
- Gersick, C. (1991). Revolutionary change theories: A multilevel exploration of the punctuated equilibrium. *Academy of Management Review* 16(1) 10-36.
- Gharajedaghi, J., and Ackoff, R. L. (1984). Mechanisms, Organisms and Social System. *Strategic Management Journal (pre-1986)* 5 (3): 289
- Giard, V., and Midler, C. (1993). *Pilotages de Projet et Entreprises: diversités et convergences*, ECOSIP, Paris: ECONOMICA.
- Giddens, A. (1986). *The Constitution of Society: Outline of the Theory of Structuration*. University of California Press, Berkeley, CA.
- Gomez, PY. (1994). *Qualité et Théorie des Conventions*. Economica, Paris, France.
- Gomez, PY., and Jones, B.C. (2000). Conventions: an interpretation of deep structure in organizations. *Organization Science* 11(6): 696-708
- Guénon, R. (1986). *Initiation et Réalisation Spirituelle*. Paris: Editions Traditionnelles.
- Kuhn, T. (1970). *The Structure of Scientific Revolutions*, Chicago, IL: University of Chicago Press, (1970 edition).
- Kurtz, C. F., Snowden, D. J. (2003). The new dynamics of strategy: Sense-making in a complex and complicated world. *IBM SYSTEMS JOURNAL* 42 (3)
- Le Moigne, JL. (1995). *Les épistémologies constructivistes*. Paris: PUF.
- Le Moigne, JL. (2003). *Le Constructivisme - Tome 3 Modéliser pour comprendre*, Paris, Ed L'Harmattan, Coll. Ingenium
- Leroy, D. (1994). 'Fondements et impact du Management par Projets', *Thèse de Doctorat*, IAE de Lille - USTL, 12/94, p. 17-22
- Levi-Strauss, C. (1971). *The Elementary Structures of Kinship*. Beacon Press, Boston, MA.
- Levi-Strauss, C. (1974). *Structural Anthropology*. HarperCollins, New York.
- Lewis, D.K. (1969). *Convention: A Philosophical Study*. Harvard University Press, Cambridge, MA.
- NASA. One Hundred Rules for NASA Projects Managers. Adresse URL : [http://pscinfo.pscni.nasa.gov/online/msfc/project\\_mgmt/100\\_Rules.html](http://pscinfo.pscni.nasa.gov/online/msfc/project_mgmt/100_Rules.html)

- Orlean, A. (1989). *Pour une approche cognitive des conventions économiques*. J.-P. Dupuy, ed. L'économie des conventions, *Revue Economique* 2 (Mars) 241-272.
- PMI Standards Committee. (2000). *A guide to the Project Management Body of Knowledge*. Upper Darby, Project Management Institute.
- Polanyi, M. (1958). *Personal Knowledge*. Chicago, IL: University of Chicago Press
- Schein, E. (1980). *Organizational Psychology*. Prentice-Hall, Englewood Cliffs, N.J.
- Schumpeter, J. A. (1989). *Essays on Entrepreneurs, Innovations, Business Cycles, and the Evolution of Capitalism*. Transaction Publishers, New Brunswick.
- Senge, P. M. (1990). *The Fifth Discipline, the Art and Practice of the Learning Organization*. New York: Doubleday Currency.
- Senge, P. M. (1994). *Building learning organizations*. B. De Wit, R. Meyer, eds. *Strategy: Process, Content, Context*. West Publishing, Minneapolis, MN.
- Sugden, R. (1989). Spontaneous order. *J. Econom. Perspectives* 3 (Fall) 8597.
- Turner, J. R. (1993). *The Handbook of Project-Based Management*. London: McGraw-Hill - The Henley Management Series.
- Von Mises, L. (1976). *Epistemological Problems of Economics*. New York: New York University Press.
- Von Mises, L. (1981). Praxeology. *The Freeman: Ideas on Liberty*, 31 (9)