

# Killing the false gods of Project Management

**Ordo ab Chaos**



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## Montjoie!

In any paper it is useful to introduce the motivations and to be clear about the reasons for writing it. For some time I have perceived a need to try to clarify the foundations of the discipline of project management, or at least elucidate what these foundations could be. An immodest task, one might say! But not a neutral one!. As professor and director of the post graduate program in project management as well as a practicing consultant, I am constantly surprised by the way the world, i.e.. organizations, universities, students and professional bodies, see 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 organizational change. Good motivations, you might say! And I agree, but the problem is that most of the tools, techniques and methods involve a conceptual approach, based of 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 is claimed to be able to deal with complex problems that do not have clear or straightforward solutions. The apparent lack of foundations, leading, perhaps, to theoretical error, underpinning the application of technics and tools, the lack of a clear epistemological position in most of the research to date, the lack of a clear paradigm in most of the literature, seems, from my perspective, to be a real barrier to effective understanding and communication of the true nature of project management, leading to nonsense, to a dynamic a fad, where hype, advocacy of his 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 [1]

It is often convenient, and lucrative to reinforce accepted belief systems, built on many centuries of thinking based on the positivist paradigm. Positivism has lead 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 discreet discipline. At most universities it is treated as a sub-discipline in Construction, Engineering or Business faculties. At the same time it is claimed to be a trans-functional discipline. This situation is itself contributing to a reinforcement of the positivist paradigm that pervades

teaching, research and practice of the discipline.

My argument rests on the observation that Project Management needs to be a complex discipline because it aims to deal with complexity! In mathematics it is well known that to control a complex system with "n" dimensions, you need an "n+1" dimensional system. Project management needs to integrate both Quality and Quantity; To Be and to Have. Project management is a process of naming, of revelation, of creation. An observation that can be made of all traditions and initiations into those traditions, is that the name given to the traditions becomes a vehicle of the intrinsic qualities, which confers on the receiver the rite of passage and indicates to all the mission of the owner. Thus, my purpose is to defend the proposition that project management has a *raison d'être* in itself, and should be a discreet discipline; that project management is both a discipline and an art; and to contribute to a better understanding of the integrative, epistemological position proposed, to be found in the very nature of project management. So why kill the false gods of project management?

## Why the False Gods must be killed

Focusing on the role within organizations of the project management discipline to design and implement strategy, as source of competitive advantage through the development of competencies leads me to question the way the project management field is defined. Indeed this field is the basis for the development of standards, of competencies, and beyond this, a source of value for people, organisations and society. The following insights into some major issues within the project management field, provides an inventory of the main questions.

### Strategy: Management of by/of projects, to deal with complexity

Over the past forty years project management has become a well-accepted way to manage organizations. The field of project management has evolved from operational research techniques and tools to a discipline of management (Cleland 1994, Bredillet 1998, 1999). Many authors emphasize the evolution when discussing how to manage projects: "*this book traces the development of the discipline of project management*" writes Morris (Morris 1997). Project management becomes *the way* to implement corporate strategy (Turner 1999, Frame 1994) and to manage a company: "... *value is added by systematically implementing new projects - projects of all types, across the organization.*" (Dinsmore 1999). Management of Projects, the way to manage projects within the same organization (Morris 1997), and Management by Projects, projects as a way to organize the whole organization (Gareis 1990, Dinsmore 1999), are both a good examples of that approach. To continue the discussion in relation to strategic issues, it can be pointed that strategic processes, in other words focused actions, implement strategy, defined in its dynamic dimension. These processes aim to modify the conditions of insertion of a firm into its environment. Through such processes, resources and competencies are mobilized to create competitive advantage, a source of value. As resources are easily shared by many organizations, competencies are the relevant driver. Thus, through processes or projects, past action is actualized as experience, present action reveals and proves competencies, future action, discounted as projects, through experimentation lays the formation for new competencies (Lorino and Tarondeau 1998). Lastly, projects are forms of organization that places a company in relation to its environment. As projects are the vectors of the strategy (Grundy 1998), project management is a way to deal with the characteristics of the whole environment: complexity (Arcade 1998), change (Voropajev 1998), globalization, time, competitiveness (Hauc 1998). Thus, with the help of project management, strategic management actually becomes the management of the irreversibility (Declerck, Debourse 1997), concentrating on the ecosystems project/company/context, operation/company/context and their integrative management (Declerck, Debourse, Navarre 1983).

### Competencies, source of competitive advantage and creation of value

As stated above, competencies (both individual, team and organizational) are at the source of competitive advantage and creation of value (Stata 1989, de Geus 1988). International research programs are currently concerned with these issues: For example, Lynn Crawford, directing the Project Management Competence Research Project, writes that "*interest in project management competence stems from the very reasonable and widely held assumption that if people who manage and work on projects are competent, they will perform effectively and that this will lead to successful projects and successful organizations*". (Crawford 1998) The PMI (Project Management Institute) research project "Project Manager Competencies" asserts in the project overview that "*The Project Manager Competency Framework will be based on the premise that competencies have an impact on outcomes indicative of effective performance. The degree or extent of this impact is expected to vary depending on certain contingencies (such as project types and characteristics). At a more specific level, the framework will identify and define some of the key dimensions of effective performance, the competencies that likely impact performance, and the contingencies likely to influence the extent to which a particular competency has an impact on performance*". These projects and the development of professional certifications appear to contradict former findings. For example, Pinto & Prescott (1988) conclude that the "Personnel factor", even if designated in theoretical literature as a crucial

factor in project efficiency, is a marginal variable for project success (For a criticism of their findings, see Belout 1998). A working paper (Turner 1998) shows the influence of the project managers on shareholder value: *"Projects are undertaken to add value to the sponsoring organization. In the private sector this ultimately means increasing the value of shares to the holders of equity in the company"* (see also Hartman 2000). But performance is also related to the maturity of an organization; its capability in dealing with projects, especially through the aspects of learning. The OPM3 research program (PMI Standards Committee), and other papers (for example: Remy 1997, Saures 1998; and Fincher and al 1997) and books (Frame 1999) explore the relations between organisational maturity and project success. The issue is important within the context of globalization of the profession (Curling 1998).

## **Project Management: A knowledge field that is not yet (that) clear**

First, hypothetically, it might be useful to assume that the Project Management knowledge field does exist. Consider Audet's definition (1986) *"a knowledge field is the space occupied by the whole of the people who claim to produce knowledge in this field and this space is at the same time a system of relationships between these people. Those persons are competitors to gain the control of the definition of the conditions and the rules of production of knowledge"* with respect to the behaviour of professional bodies, authors, academics. For example, the relationships between established professional bodies (PMI, IPMA – International Project Management Association...) and their way of development (PMI, through PMBOK® Guide; IPMA, through a shared competence baseline (ICB – IPMA Competence Baseline), contextualised according the national needs of the national associations, the fact PMI Headquarter withdraws from the Global Project Management Forum, kind of supra-institutional body trying to promote a common basis in term of knowledge, the wish to create global standards, the fact that PMI is very active in supporting research in such as establishing a theory of project management, demonstrating project management value for executive, achievement of corporate strategy through successful projects, to quote a few, the evolution of bodies of knowledge (PMBOK® Guide, APM BOK...), of the themes of papers and books, from techniques to psycho-sociology of temporary groups through knowledge creation and organisational learning, illustrate this. In addition the field, currently characterised by this abundance of initiatives, development of standards, increasing use of project management methods and techniques, this field is in pre-paradigmatic phase according to Kuhn's sense (1983). It is actually the place of a revolution, inaugurated by a growing sense, still restricted to a narrow subdivision of the project management community, that the existing positivist paradigm has ceased to function adequately in the exploration of the nature. A second and more profound aspect upon which the significance of the first depends is that the success of revolutions necessitates the partial relinquishment of one set of institutions in favour of another. Is it the sense of the creation, in USA, of an alternative professional body (ASAPM – American Society for the Advancement of Project Management) to PMI with different rules (in particular, much more flexible about the legal aspects and copyright rules, the aim being to make knowledge produced by the members available and usable by the community in large)? Is it the sense to PMI initiative, the wish to establish regional headquarters? In order to develop competencies, a knowledge field is needed. But both in academia and the business world, the field of project management is not clearly established and defined. In addition the field is still evolving in breadth and in depth. In breadth, it is embracing information systems, human resources management, change management, strategic management, economic value management, psychology, management of technology, quality, sociology, multicultural management, systems thinking, knowledge management, organizational learning, team management, temporary group, systems engineering... In depth, it is going further into cost engineering, finance, specific aspects of risk management, earned value management, scheduling methods, resources allocation, project life-cycle, processes, studying phases, types of projects, projects portfolio management and so on. Also, a number of books, and papers, explore issues that contribute both depth and breadth in several dimensions: technical, methodological, and managerial. They aim to fill a long-standing need for a comprehensive, unified, and practical description of the field (among others see: Archibald 1992, Forsberg, Mooz 1996, Harrison 1992, Cleland 1994, Kerzner 1997, 2000, Pinto 1998, Dinsmore 1993). Over the last twenty years the profession has been working on its recognition, and standards and certifications has been addressed by professionals associations, working both on the definition of field and on the recognition of Project Management as a Profession. Definition of standards bodies of knowledge (broad range of knowledge that the discipline encompasses plus some behavioral characteristics) certification and assessment of project management competence models, maturity models and best practices reflect this trend (Toney & Powers 1997, Hobbs & Miller 1998, Hobbs 1997, Gareis 1997, 1998, Project 2000 1998, Hartman 2000, Kerzner 2001). Three main approaches can be identified among the attempt to clarify the field (IPMA Global Working Groups 1999). The first relates primarily to the management of projects (ISO 10006, PMBOK® Guide 2000). The second is designed primarily as a standard set of guidelines to define the work of the project management personnel and as a basis for the assessment of the competence of project management personnel. The IPMA Competence Baseline and the Australian National Competency Standards for Project Management (ANCSPM) are good examples albeit different in their perspectives and coverage (Turner 2000a, Turner 2000b). The third is directed at PM organisational practice (current PMI project OPM3 on PM Maturity Model). My main point is the ongoing adaptation of the different standards according to the change in project management field. Standards, considered as socio-economical constructs, (Gomez 1994) are the result of negotiation enabling reduction of complexity and uncertainty in the relations between the stakeholders of projects. But the global evolution of the environment changes the bases of the negotiation, and hence standards need to evolve in a dynamic perspective. And the quest for key success factors, best practices and other "best ways" don't prevent failures and waste of money. The current development of bodies of knowledge and reengineering of certification show that the current situation is not that clear and a number of practices are hindering

growth and quality of the field. The new PMBOK® Guide 2000 (last version was from 1996), the evolution of the PMI® certifications (PMP, CAQ, PMA...), the reengineering of the French project management standards on behalf of AFNOR, the evolution of certification processes in France to propose a common basis to cost engineering (ICEC) and project management (IPMA) certifications, the current reflexions and works about NVQs are examples of this trend.

From above it can be concluded that:

- 1 - project management is becoming the way to manage the development of organizations;
- 2 - competencies and learning (both individual and organizational) are the source of competitive advantage, and, of creation of value,
- 3 – the project management knowledge field is not that clear because it is evolving in depth and breadth, so that standards, using a broad definition of this term, as social constructs, need ongoing adjustment. This demonstrates that the positivist perspective, if valid in a specific area, cannot produce answers to every type of problem... Furthermore, I argue that many applications of Project Management are done without questioning the deep nature of Projects. What is a Project? On which epistemological foundations can we build the Project Management field? Which hypotheses apply to the field? What are the consequences on the development and use of theories, concepts, methods, techniques? Thus by killing the false gods I mean to question the very nature of the field, to avoid the dynamic of fad, and hopefully to give it Project Management its true place. In order to open up discussion about the foundations of our Project Management Programmes and their interdisciplinary nature, I propose to outline some general reflections to address these questions.

# Salvation is the resolution of opposition ! An alternative epistemological approach to positivism and constructivism

## Scrutinizing the concept of Project

From one perspective, (Leroy 1994) the concept of Project is generally apprehended by listing its intrinsic characteristics. I have selected three definitions, chosen to demonstrate the range of different perspectives in the apprehension of the project concept: § *"a project is a temporary endeavor undertaken to create a unique product or service"* (PMBOK® Guide 2000), pointing out the instrumental perspective; § *"an endeavour in which human, material and financial resources are organized 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 and ali 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 history of Project Management see Leroy 1994): 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 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 organizations, with the appearance of the standards, either with descriptive or prescriptive feature. The underlying vision is, here, a positivist [2] 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... But, through projects, Man builds Reality and as highlighted it authors like Debourse and Declerck (1997), the management of projects by its mode of deployment within the ecosystem project/firm/context implies a systemic vision, an "intelligent" action, "*ingenium*" [3], *this mental faculty which makes possible to connect in a fast, suitable and happy way of the separate things*" as stated by Lemoigne (1995), quoting Giambattista Vico (1708). Thus the evolution noted in the use of project management and/or management by projects (Midler, Giard, Navarre 1993) and its structuring characteristics suggests a constructivist vision. (for Cognitive constructivism see Jean Piaget – for Social Constructivism see Lev Vygostky) [4].

## Tensions and paradoxes in Project Management

Thus, 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 figure of the project can constitute today a suitable reference in the management of the organizations and makes it possible these last to create and to innovate by using several parameters"* which it organizes in a paradoxical way. Not being conscious of this often involves us in *"towards a drift of totalitarian, or technicist project"* or *"towards simplification, the vulgarizing of projects brought back to our daily life"*. Current organizations 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... *"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 company. 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, 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, i.e. 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 Michael Polanyi (1958), I propose an alternative epistemological perspective both to positivism and constructivism. I have no intention to separate personal judgement 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 (for example a 2-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 (see Kuhn 1983 above): 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 optimisation, 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...) 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. For instance, the Montecarlo analysis is often applied to assess risk where the hypothesis underpinning the application of is wrong from a scientific perspective because they assume that each task is independent of the others, neglecting any systemic view, instead of developing a systemic model, and using conditional probabilities (Bayesian approaches)... How many decisions are taken, using wrong tools because of the lack of understanding of the underlying approach? Another example is the hype around Critical Chain: this new "old" tool is seen as a panacea to achieve better productivity in projects, without any considerations of the nature of the project or of the phase of the project: It is alright to use such an optimisation method when the objectives and the context are well-defined (meaning they are in the scope of application of probabilistic and determinist approaches), but not at the front-end phase of a project, or for a pure research project, realm of uncertainty (meaning probabilities do not apply...). 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 being able to be defined (for example cost control, scheduling, communication, quality, information system, temporary group...) but seen as a whole, it is a transition to the

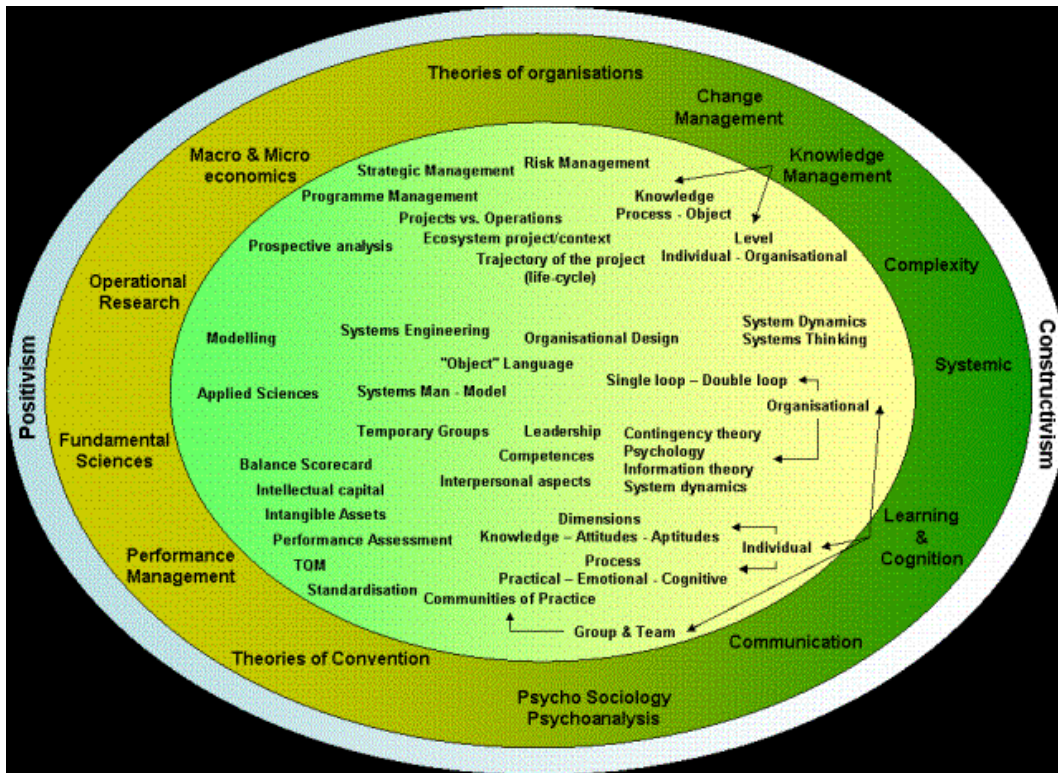
limit, and in mathematics the result of an integral is both quantitatively and qualitatively more than the sum of the parts. In other words, it can be called a system effect: parts A, B and C forming a system S, keep some of their properties and potential performances, lose some others, but gain some entirely new performances. (Legay 1996) From this point of view of the conceptual field of management of projects, it seems to us that there is *"inseparability of the knowledge and the representation understood in their distinctable activity, the intentional experience of the knowing subject and the groping construction of the subject representing knowledge, this one undoubtedly constituting the strong assumption on which are defined teachable knowledge today, both scientific and ordinary"* (Lemoigne 1995). So for me, Project Management as knowledge field is both an Art [5] and a Science [6], 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 his two hypotheses of reference as underlined by Lemoigne (1995): 1 - 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 ("the intelligence organising itself"). This hypothesis associates to the strict design knowledge (the cognisable 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 intelligence. 2 - 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.

$$DIPP = \frac{EMV}{ETC}$$

These epistemological considerations lead me to define now, on meaningful foundations, the theories, concepts, methods and tools part of my approach to project management.

# Discourse on the method...

... of rightly conducting the reason, and seeking truth in the sciences (René Descartes 1637) *"I am in doubt as to the propriety of making my first meditations in the place above mentioned matter of discourse; for these are so metaphysical, and so uncommon, as not, perhaps, to be acceptable to every one. And yet, that it may be determined whether the foundations that I have laid are sufficiently secure, I find myself in a measure constrained to advert to them."* (Part IV) Theories and concepts As pictures are more explicit than long sentences, I would like to propose the following map of the main theories and concepts part of my approach to an integrated Project Management field. This picture does not intend to be exhaustive, but it is aiming to give an overview of the articulation between paradigms (positivist – constructivist), general theories and concepts roots of the body of knowledge on which are based methods and tools.



## Methods and Tools

Previous research (Bredillet 1998, 1999), based on Max Wideman's work (1991, 1997, 1998) and on the integrative nature of the field as shown above, offers the hypothesis that the Project Management Body of Knowledge and Practice interacts and overlaps with three generic domains: General management, supporting disciplines and application areas; technical or industrial bodies of knowledge and practices. An immediate consequence of this, is that Project Management generic methods and tools will need a specific framework enabling the contextualisation of their use in the project environment. Furthermore, they will also need a specific framework enabling their contextualisation according to the specific dynamic of a project trajectory or life-cycle phase. For example, risk assessment might use a system dynamics model specific to the application area of a project in the front-end stage (see above hypotheses of application), and might use a more conventional approach in the more stabilised stages. One of the key understanding in project management is that learning and practice are integrated (see above the notion of "Ingenium"). To facilitate this praxis, and the double contextualisation, I propose to use a specific meta-method called MAP Method (Declercq & ali 1983, 1997). MAP is a process of analysis, solving and decision of macro and micro socio-economic problems. It is founded on the constitution of an office of strategic decisions – the Map room - equipped with up-to-date audio-visual and information system materials and resources, and on the dynamic interaction between analyst and decision makers.

## Method MAP has the following objectives and characteristics:

§ Resolution of the ill-structured problems. The banal experience of whoever has worked on entrepreneurial decision-making is to note that the great difficulty is not to discover solutions but, on the contrary, to better formulate the "statements" of the problems, posed initially in vague terms, sometimes ambiguous or contradictory. Method MAP comprises an iterative process leading to increasingly precise formulations and allowing the analyses that prepare for the decision, the implementation and the control of the project.

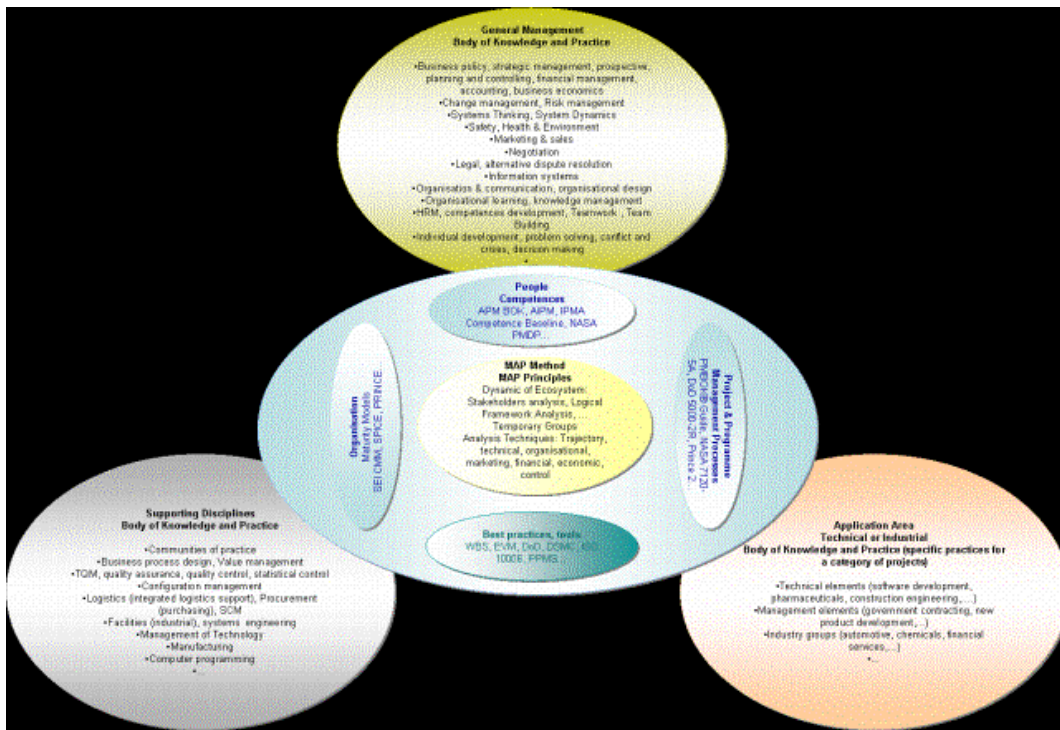
§ Common language for a team working on a project. Method MAP is conceived for teamwork. This method is essential for the two following reasons. First, teamwork supports the creativity: the controversies, the variety of ideas caused by the complementarities between members of the group generating logical reasoning, accompanied by the phenomena of associations. Second, the dynamics of the dialogue between the analysts and the decision makers limits the dangers of excesses of technocracy or subjectivity.

§ Overall perception of a project. Method MAP leads to visual and synthetic representations of complementary aspects of projects. The map room gathering the whole of these representations plunges the analysts and the decision makers into an environment of information that leads them to an overall perception – the psychologists say "gestaltist" – of the project. It is important that this contributes to a vision that translates into an intimate knowledge of the project. Method MAP makes it possible to exceed the simple analytical evaluation of each aspect of a project and prepares a global, participative and multi-criterion judgement.

§ Piloting the process of the management of the project. From the fuzzy, ambiguous, contradictory awareness of an idea of project until the immersion in an institutionalised operation, the project describes a complex trajectory throughout which Method MAP applies. In particular, the management of the studies and the definitions of the alternatives scenarios for the project considered are dealt with by the method. Thus it possible to avoid what one too frequently observes: a lack of adapted method that introduces an implicit skew into final decisions. Method MAP aims to make management of the project a process where the thought and the action interact not a linear course of a studies from the hands of analysts and specialists direct to the decision makers.

§ School for the introduction of a strategic management. Taking part in the development of a project is a motivating activity. The rupture with the institutionalised activities is favourable to the introduction of a new method which in fact, applied to the management of the projects is the translation of a vaster approach - strategic management. The keys ideas of strategic management can be introduced into an organisation starting from the exercise of Method MAP.

§ Crossroads of quantitative and psycho-sociological techniques. MAP was born from the will to associate in a coherent method both quantitative and psycho-sociological approaches. The concept of model - a necessary representation through which management takes on the real world - has operational existence only thanks to the control of the quantitative techniques (system analyses, PERT, simulation, data processing, etc.). These techniques, however, form part of a really creative process only insofar as they serve the reflection and the action of a team. Therefore MAP largely calls upon the psycho-sociological techniques, such quiet groups method, techniques of creativity, groups of confrontation, etc. The following picture shows how the combination of the different bodies of knowledge and practice are interacting within the project management field and the resulting methods and tools. At the heart of this, the MAP approach enables the dynamic integration of these different theories, concepts methods and tools, providing the framework for the contextualisation of their "right" use.



## To not conclude...

At the end of the initiation journey, I had to resist and fight against the positivist temptation, to kill the false gods and be saved from any fundamentalism, thanks to a process of resolution of opposition. I hope that I have helped to reveal the basis of project management so that we may become more conscious of the project management discipline in praxis. From some major issues to the theories, concepts, methods and tools and then through a discussion of epistemological issues, I have tried to point out the very nature of the field and the necessity of being very clear, in accordance with this nature, about paradigms theories and hypotheses underpinning the use of methods and tools. As both imply action – I should say *praxis* - and in consequence of this, I have presented a specific innovative approach, the MAP method, linking practice and education at individual, team and organisational level, to deal with the integrative characteristic of the domain. In so doing I hope to have contributed, however humbly, to a better perception and understanding of this fascinating field Be-Have!!!! Ordo ab Chaos

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[1] 15% of ERP, SCM... projects have been considered to be successful in USA in 1999, for a total of 250 Billions of US\$ spent... (APICS survey – CPIM journal n° 46 – 17/07/2000) Long live to SAP projects!!!

[2] *philosophical doctrine that denies any validity to speculation or metaphysics. Sometimes associated with empiricism, positivism maintains that metaphysical questions are unanswerable and that the only knowledge is scientific knowledge. The basic tenets of positivism are contained in an implicit form in the works of Francis Bacon, George Berkeley, and David Hume, but the term is specifically applied to the system of Auguste Comte, who developed the coherent doctrine. In addition to being a dominant theme of 19th-century philosophy, positivism has greatly influenced various trends of contemporary thought. Logical positivism is often considered a direct outgrowth of 19th-century positivism. (source: Encyclopedia.com)*

[3] *INGENIUM: "For the ingenium was given to human to understand, i.e. to make" G Vico Thus characterized it since 1708 the "Method of the studies of our time", method or rather advance - these ways which we build while going - what restores the vast contemporary project of a New Reform of Understanding. Deploying all faculties of the human reason, the ingenium - this "strange faculty of the human mind which allows him to co-join", i.e. to give direction to its experiments of the "world of the life" – makes us understandable of these multiple interactions between knowledge and action, between including/understanding and making, which we recognize in our behaviors within the human societies. With collective*

resignation to which still too often invite us scientific knowledge sacrilizing reductionism and deductivism, "sciences of ingenium" oppose the attractive capacity of the human mind to co-join, to understand and invent by forming projects, with this "stubborn person rigour" to which already testified Léonard de Vinci.

[4]

[http://search.britannica.com/frm\\_redir.jsp?query=constructivism&redir=http://carbon.cudenver.edu/~mryder/itc\\_data/constructivism.htm](http://search.britannica.com/frm_redir.jsp?query=constructivism&redir=http://carbon.cudenver.edu/~mryder/itc_data/constructivism.htm)

[5] Definition (Merriam-Webster):

Etymology: Middle English, from Old French, from Latin *art-*, *ars* -- more at [ARM](#)

Date: 13th century

1 : skill acquired by experience, study, or observation <the art of making friends>

2 a : a branch of learning: (1) : one of the humanities (2) plural : [LIBERAL ARTS](#) b archaic : [LEARNING](#), [SCHOLARSHIP](#)

3 : an occupation requiring knowledge or skill <the art of organ building>

4 a : the conscious use of skill and creative imagination especially in the production of aesthetic objects; also : works so produced b (1) : [FINE ARTS](#) (2) : one of the fine arts (3) : a graphic art

5 a archaic : a skillful plan b : the quality or state of being artful

6 : decorative or illustrative elements in printed matter

synonyms [ART](#), [SKILL](#), [CUNNING](#), [ARTIFICE](#), [CRAFT](#) mean the faculty of executing well what one has devised. [ART](#) implies a personal, unanalyzable creative power <the art of choosing the right word>. [SKILL](#) stresses technical knowledge and proficiency <the skill of a glassblower>. [CUNNING](#) suggests ingenuity and subtlety in devising, inventing, or executing <a mystery plotted with great cunning>. [ARTIFICE](#) suggests technical skill especially in imitating things in nature <believed realism in film could be achieved only by artifice>. [CRAFT](#) may imply expertness in workmanship <the craft of a master goldsmith>.

[6] Definition (Merriam-Webster):

Etymology: Middle English, from Middle French, from Latin *scientia*, from *scient-*, *sciens* having knowledge, from present participle of *scire* to know; probably akin to Sanskrit *chyati* he cuts off, Latin *scindere* to split -- more at [SHED](#)

Date: 14th century

1 : the state of knowing : knowledge as distinguished from ignorance or misunderstanding

2 a : a department of systematized knowledge as an object of study <the science of theology> b : something (as a sport or technique) that may be studied or learned like systematized knowledge <have it down to a science>

3 a : knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through [scientific](#) method b : such knowledge or such a system of knowledge concerned with the physical world and its phenomena : [NATURAL SCIENCE](#)

4 : a system or method reconciling practical ends with [scientific](#) laws <culinary science>

5 capitalized : [CHRISTIAN SCIENCE](#)