THE PRAGMATIC PROJECT MANAGER

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Abstract

Project management has been adopted by information technology, but the projects are failing to the tune of $14 billion per year. Only 32% of projects were delivered with all their features on time and on budget in 2009. (PMI, Nov 2009. p18) If projects were people, we would be holding the project manager responsible in the same way we would hold a doctor negligent if his success rate were only 32%.

This paper subscribes to the position that projects fail because we have not developed theory from the body of knowledge in the discipline. As such, it looks at the philosophy of pragmatism as a potential framework within which to develop a strong theory. In turn, the theory can function as an epistemological pole in dialectic tension to practice and create a praxis of practice. With that in place project managers can engage in the discipline, not as carpenter tradesmen but as academically vetted professionals in the same way a doctor enters his profession.

The paper examines the intersection between the current PMBOK and pragmatism and then examines the elements of ‘good theory’ to see if pragmatic philosophy can assist.
In September 2011 the Harvard Business Review published a study by Flyvbjerg and Budzier that measured risk involved in over 1400 projects with a collective average of 167 million dollars per project. They pointed out the perils of IT risk in those projects.

“IT projects are now so big, and they touch so many aspects of an organization, that they pose a singular new risk. Mismanaged IT projects routinely cost the jobs of top managers, as happened to EADS CEO Noël Forgeard. They have sunk whole corporations. Even cities and nations are in peril. Months of relentless IT problems at Hong Kong’s airport, including glitches in the flight information display system and the database for tracking cargo shipments, reportedly cost the economy $600 million in lost business in 1998 and 1999...Fully one in six of the projects we studied was a black swan, with a cost overrun of 200%, on average, and a schedule overrun of almost 70%.” (Flyvbjerg, 2011 Sept, HBR url)

Clearly, after forty years of building the practice of project management and the last twenty-nine accumulating the practice into a book of knowledge, project management has met its biggest challenge; information technology. And it will take information technology to address the challenge. Therein lays the confusion. In the plethora of quickly published opinion, there is a true attempt in the literature to provide answers, but researchers are adrift in small lifeboats without a solid theory of practice to guide them. In its absence, bright people fail to collaborate as scientists, instead trying to apply a multitude of theories borrowed from other disciplines in an effort to build a new art rather than a new science.

This paper questions the “rush to solve.” After forty years with little improvement, perhaps it is time to slow down and focus on getting the foundation built before we attempt to maximize the flush from the bathrooms on the top floor. This paper sides with those who call for the development of a strong theoretical foundation, built from the union of project management experience and the hard sciences under the logic of philosophic discipline. It
explores three fundamental objects to highlight what exists in the intersection between the philosophical discipline of pragmatism and the practical application of the principles of project management.

First, it looks at the current body of knowledge, known as the PMBOK, to find out what current practitioners are doing with the past twenty nine years of wisdom accumulated in the tome. Second, it looks to the philosophy of pragmatism to see what it can offer in the construction of project management theory. Finally, it looks to the construction of theory and the development of professional disciplines to find out how we might create the pragmatic project manager.

The Guide to the Project Management Body of Knowledge (PMBOK)

How is the PMBOK Structured?

The Project Management Book of Knowledge, commonly referred to at the PMBOK, is a guide to project management best practices. It provides the essentials of the skill set for practitioners who seek the advice and direction of the Project Management Institute (PMI.) As such, it is considered the standard. So what does the standard have to say?

Essentially the PMBOK delves into the standards by dividing them into process groups, of which there are five; initiating, planning, executing, monitoring and controlling, and closing. Those groups are matrixed to nine knowledge areas; integration, scope, time, cost, quality, human resources, communications, risk and procurement. Each knowledge area has inputs, used by various tools and techniques to create new outputs. (PMI, 2008, p
The book seeks to assist with successful execution of an idea for a product or service while reducing excessive risk. It is assumed that those who are trained and well acquainted with each of the tools, and there are 91 of them (Besner, 2009, Appendix B) has the skill that it takes to manage a project while minimizing exposure.

But, according to the Harvard Business Review, the correlation between skill and success is not solid, even in the most seasoned companies or under the direction of top tier consultants. In the largest study ever conducted on IT change initiatives, conducted by Bent Flyvbjerg, a professor at Oxford University and Alexander Budzier, a consultant at McKinsey & Co., cost overruns average 27%. One in six had overruns of 200% in cost and 70% in schedule. Failed projects added up to over 14 billion dollars and their impact was powerful enough to bankrupt Kmart, cause Hershey a $100 million loss during its Halloween sales period, and force the resignation of Levi Strauss CIO, David Bergen. The Levi Strauss CIO resigned after a $5 million project to migrate to SAP, lead by expensive, bright and high profile consultants at Deloitte, forced the company to take a $192.5 million charge against earnings to compensate for the botched project. (Flyvbjerg, 2011, HBR url)

So, it is worthwhile to take a closer look at the PMBOK and see what is going on.

**What is emphasized in the PMBOK?**

The PMBOK covers a great deal of ground and provides a lot of useful assistance to project managers. Perhaps it provides so much that it needs a companion to help quickly expose the right tool at the right time. Professors Besner and Hobbs at the University of Quebec at Montreal have been studying the tools of the PMBOK to see which ones are most used and provide a ranking of importance for the toolset. The challenge, of course, is
that the PMBOK tools can not be applied equally in weight by every industry or even by projects within the same industry. Aware of this, Besner and Hobbs selected 70 of the tools and ran tests. They found that even across project types and industries there is a large commonality, regardless of type or sector. (Besner, C. 2006, Figure 1)

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Exhibit 2. The 70 Tools in Decreasing Order of Average Use

Another, less scientific, but equally valuable, observation can be made from the PMP exam for project management certification. What we see, from a review of the question types in the exam, is an emphasis placed heaviest on execution and monitoring and less on initiating and closing.
The PMP exam directs examinees to prepare for questions distributed 13% in initiating, 24% in planning, 30% in execution, 25% in monitoring and 8% in closing. (PMI, 2010, p 1) This is interesting because the most valuable asset in the project is actually in the closing section where experience is captured so that improvement can be made for the next project. (Jugdev, 2007, p 437) The other critical phase is initiation. It is where the sponsor is chosen, the relationship is forged between the sponsor and the project manager, and all the affected parties are identified. (Jugdev, 2005, p 29)

Projects will often fail for exactly these reasons; ill fits create tension, history is unknown and therefore repeated, and people who have a vested interest are not consulted until it is too late. When these are set correctly, execution and monitoring become easier.

Where is PMBOK used?

Project Management is used across most industries and around the world. It came out of the collective experience of project managers who, 40 years ago, came from construction, defense, engineering and manufacturing. Only in the past 20 years has it been adopted by business and management. Today it is in almost every industry and crosses more than 85 occupation. (PMI, 2011, p 2)

“Project management has become an essential ingredient for success for most organizations, whether they realize it or not,” says D.W. Haskins, director of the master of science in project management program at the University of Wisconsin, Platteville, Wisconsin, USA. (PMI, 2011, p 3)

According to the PMI: “Project management provides companies with a common language and methodology that facilitate the management of projects of all sizes, especially those with personnel in multiple locations.
What differentiates project management from other methods and processes is its ability to define constraints for scope, schedule, budget and quality. It also provides systematic documentation and “lessons learned” reviews that can increase knowledge transfer and speed up organizational development.” (PMI, 2011, p 3)

The methodology has found adoption in universities across the world. According to the chart below, while North America leads the charge, Europe, the Middle East and Africa are only in second place by 1%.

The implications are far reaching, especially if this very young discipline sees the PMBOK as a canon of project management process. To truly fit every environment means that for the foreseeable future, it will need to be challenged or it will continue to encourage the large scale failures we have seen, even at the hands of expert consultants, like IBM, Accenture and Deloitte.

Distribution of Project Management Degree Programs–Regions

Of the 640+ degrees identified:
- 35% North America
- 34% EMEA
- 26% Asia Pacific
- 5% Latin America

Who Uses PMBOK?

As of Oct 31, 2011, there are 3,622,257 copies of the PMBOK in circulation. Over 370,233 people are members in the Project Management Institute. That is impressive
considering that the first edition of the book was not published until 1987. Today there are 487,066 practitioners actively maintaining their certification. (PMI, 2011, Fact File)

But are they using it? According to Besner and Hobbs, there remains a great amount of the book that is not used to its fullest advantage. The notion that this is a cause of project failure seems plausible but does not explain how expert consultants, who cannot plead ignorance at this level, are leading projects that fail on a scale large enough to threaten the health of a major company.

The Besner study targets database technology as one area where the PMBOK recommends but many fail to implement. They posit that:

“To implement and use these tools, project managers would require organizational commitment and support. The survey results suggested that such investments are worth considering because the practitioners believe that these tools will contribute to improved project performance” (Besner, 2006, Perceived Value)

Besner points out that project software is used extensively for scheduling but not as much for determining earned value, stakeholder analysis and feasibility studies. Again, these are tools in the initiate phase of a program which has less value (13%) in the PMP certification process. There may be a correlation between the lack of emphasis on project initiation and practice that can explain this but no study was found to examine this.

“PMI even has the College of Performance Management that promotes the use of earned value; it also publishes a standard on the subject. Identifying earned value and stakeholder analysis as important and underutilized tools validates the already significant status of these tools within PMI standards. The PMBOK(R) Guide's references to feasibility studies place it outside the scope of project management. Identifying the feasibility study as an important but underutilized tool reinforces the need to increase its importance in the project management literature and practice. Moreover, the
feasibility study is related to the strategic front-end phase...” (Besner, 2006, Perceived Value)

So, are project managers using the PMBOK? Sort of.

Is it, even with 91 published tools, sufficient for them? Sort of.

Is the attempt to create a book of knowledge on this subject reaching too far?

**Does the PMBOK evolve with work culture?**

The PMBOK began as the ESA (Ethics, standards and Accreditation) Report published in the Project Management Journal in 1983. It set standards baselines for knowledge in scope, cost, time, quality, HR, and communications. The additional areas of procurement, risk and were added in an update published in the Project Management Journal 3 years later in 1986. The final edition was published in August 1986 as the PMBOK.

In 1994 the title was changed to PMBOK Guide to make it clear that one document could never cover the entire body of knowledge in this field. Two years later, in 1996, the PMBOK Guide superseded the PMBOK. It included a ninth knowledge area; integration. The framework was rewritten in terms of their component processes; inputs, tools and techniques, and outputs. Those processes became the core of the ISO 9000. (PMI, 2008, PMBOK Appendix B)

In 2000 a further update was made to clarify that projects are managed to requirements and those requirements come from needs, wants and expectations. At that time new material was also added to reflect changes in the field. Earned value and risk were part of that expansion.
In 2004, the third edition was released with a new emphasis on the process groups. Seven of them were added, thirteen renamed and two deleted. (PMI, PMBOK, Appendix B, section b5) The introduction of project management as a system was introduced. In this edition the initiating and closing groups were given more emphasis. The discussion on integrating processes and activities was completely rewritten.

It appears that the PMBOK has continued to evolve with our culture, although the complexity of the contributions have created a larger infrastructure to support the effort. In spite of that, large projects are failing and practitioners are seeking alternative solutions to the onerous inventory of tools and techniques. The PMBOK has not nailed down the fundamentals where risk continues to cripple corporations. So, can the discipline of pragmatic philosophy help?

The Philosophy of Pragmatism

Pragmatism is a very strong tree, despite its young age, and one that practitioners will find filled with the ripe fruit of many fertile minds. It is one of the few areas where philosophers from many branches come to contribute valid ideas and enrich the body of knowledge, because it is about knowledge, it is epistemological. Philosophical heavyweights, peers and opponents have all played a role including Aristotle. Kant, Hegel, Husserl, Mills, Schopenhauer, Heidegger, Habermas, and Weber; each one making his mark on this philosophical branch, in some cases, even before it existed.
Belief as the Essence of Pragmatism

Pragmatism, the American philosophy that seeks to identify meaning and truth, evolved in the 1870s at Harvard when a small group of scholars met as part of Charles Pierce’s Metaphysical Club. While Pierce, James, Holmes, Fiske, Warner and Wright are well known figures in the formation of pragmatism, Pierce credits Nicholas St. John Green, a skillful orator, with urging adoption of belief as the wellhead. St. John Green stressed the importance of Bain’s definition that belief was that upon which a man is prepared to act. (Weiner, 1949, p 19) And, for the pragmatist, it all begins there, with a belief strong enough that action is the only course available in pursuit of the truth.

This pragmatic belief was called to attention by Immanuel Kant in his “Critique of Pure Reason.” The critiques of both pure and practical reason, along with the categorical imperative to act only when you can expect the universe to concur set the foundation upon which, in conjunction with Darwin’s evolution, the pragmatists examined knowledge in the service of truth. Knowing when it could be attributed outside experience (a priori) and when it could not was key in identifying true meaning.

In the Critique, Kant suggested that pragmatic belief is formed out of the best bet an informed person could make. (Kant, 1998, p 620) His example is that of a physician, who while trained in medicine, encounters a disease about which he knows nothing. He must make his best bet if the patient is to have a chance of recovery. It is this bet that provides the actual means to attain an end. So how does he arrive at his best bet?

When in a situation that demands action regardless of outcome, the physician will take his a priori knowledge of chemistry, physics and math (science) and join it with his
experience so he may act. The disease demands it due to the physician’s oath. His action will, when put into context, always be the best action possible for that event, even when it does not result in a return to health. It is delivered as a point where scientific knowledge (a priori) and experience (a posteriori) meet the conditions of the day under the force of the present illness. In this dialectic swirl of variables, the physician takes all that is there and sparks the lightening bolt of action, delivering, to the best of his ability, the truth. It is the response to his pragmatic belief.

The Six Emphasis of Philosophic Pragmatism.

Pragmatism contains 6 major thesis. (Britannica, 2011, Pragmatism) While these thesis belong to the philosophy of pragmatism, they do not all need to be present in every pragmatic discussion. However, if we distill them down to what they truly emphasize we can describe the philosophy in terms of its emphasis.

1. Change is the fabric of human reality and knowledge is the path to action within our changing reality.

2. Experience must carry as much weight as reason or standards for the pragmatist who seeks the truth.

3. We identify the meaning of a belief when we verify its practical consequences as distinctive to it and it alone. Once done, it is predictive.

4. Truth is found in verification, the moment when belief is warranted by investigation.

5. Ideas are functional; tools to organize plans of action, valuable only when they move action towards success.
6. “Usefulness to achieve the intended purpose” is the guide in the pragmatic search of truth and meaning, and extends to theory, language and method.

Where is Pragmatism Used?

Pragmatism is being used to build theories of project management.

In the struggle to put project management on its scientific feet, researchers Lalonde, Bourgault and Findeli turned to pragmatism to examine project management through the lens of practice. (Lalonde, 2010, p 21) In particular, they looked to understand the theory–practice link in the act of project management. Their research has concluded that project management remains a borrower of theory, perhaps just now mature enough to build its theory of practice upon its own discipline rather than remain a borrower from other disciplines. Further, that through the application of pragmatism, research can refocus the transfer of theory to practice so that the discipline can stand strong as both a scientific and professional discipline, in the same way engineering, education nursing, architecture and psychology have established themselves. The theory must be a reflective practice linked to situated theorization to be relevant.

What they mean by that is that pragmatism assists in building key characteristics of the discipline. In particular, an epistemology of practice founded on challenges to the relevance and rigor of project management research, a ‘reflection-in-action’ as described in the work of Schon who coined the term in 1983. They believe that approaches based solely on experience, process, or the actor fail to fully investigate the relationship between theory and practice. Pragmatism questions both scientific research that is out of touch with practice and practice that has no theoretical basis. In this way practitioners can begin to
benefit from management school research, ending the fuzzy boundaries between theory and practice that have marred the quality of university research and teaching in this area.

**Who is Influenced by Pragmatism?**

Pragmatism has influenced people since its advent. It has even passed into colloquial use, albeit stripped of most of its meaning. The word has come to mean expedient for many which carries with it negative connotations of sloppy shortcuts. But in its robust description it is, in fact, the opposite. Svetlana Cicmil at the University of the West of England, Terry Williams of the University of Southampton, Janice Thomas of Athabasca University and Damian Hodgson of the Manchester Business School were early advocates when they published a paper in the International Journal of Project Management titled Rethinking Project Management in which they advanced the argument that the lived experience of projects was not given appropriate weight in the assessment of project management and that a refocus on praxis was the way to correct it. (Cicmil, 2006, p 675)

Pierre-Luc Lalonde and Mario Bourgault of Ecole Polytechnique de Montreal with Alain Findeli of the Universite de Nimes advanced the use of pragmatism in a paper they published in the Project Management Journal in December 2010 titled *Building Pragmatist. Theories of PM Practice: Theorizing the Act of Project Management*. In their paper they sift through the span of practice to identify four key types of theory-practice relationships; practice as heuristic, practice supported by prescriptive models, practice supported by descriptive models and reflective practice with situated theorization. For the first time, a theory is proposed that can be constructed out of the discipline of project management
rather than borrowed from other disciplines. They call this strong theory. “This reflective theory-building activity creates instruments of thought to guide action, not in merely fashioning an image of the world. To build the theoretical corpus they contribute a methodology advocating use of empirical research grounded in project actuality.” (Lalonde, 2010, p 33)

**The Need for Theory**

Academic Literature and the literature of practitioner associations such as the Project Management Institute (PMI) confirm one important fact; despite the evolution of the discipline, projects continue to fail. In their 2009 report on IT projects the Standish Group reported that fewer projects are reported as successful (on time, within budget and having the requested features), only 32%. That means 68% did not function as envisioned. (PM Network, Nov 2009, p18) These ratios of failure to success are too high to support the thesis that the discipline has a solid basis in theory.

In fact, the lack of theory is subject of discussion among many scholars (Jugdev, 2008; Lalonde,Bourgault and Findeli, 2010; Davidson Frame, 2009; Cicmil, Williams, Thomas and Hodgson, 2006; Besner and Hobbs, 2006) who look at why the current body of knowledge has not produced a theory of practice and if it did, how would it accomplish that goal.

**What is a good theory?**

In her research on building the foundation of a good theory, Dr. Jugdev supports the work of M.D. Arnoult (Jugdev, 2008, p179) in identifying the four characteristics of a good theory: power, testability, simplicity and fertility.
“A good theory explains, predicts, and delights” (Weick, 1995a, p.155). However, good is a relative term. Characteristics of a good theory involve power, testability, simplicity and fertility (Arnoult, 1976). Power means that the theory correctly explains a variety of phenomena. Testability means that a theory clearly ascertains wrong predictions. A simple theory is elegant and involves few concepts and relationships. A theory is fertile when it offers new ideas to explore further. In essence, a good theory answers ‘why’, ‘what’, or ‘how’ questions in a complete and parsimonious manner (Weick, 1995b). A good theory is hard to produce routinely because goodness is multidimensional (DiMaggio, 1995).

Researchers Lalonde, Bourgault and Findeli take this a step further by examining the difference between weak theory and strong theory and argue that project management is ready to build its foundation under experience, putting in the category of strong theory.

(Lalonde, 2010, p22)

“More particularly, this standpoint invites researchers to specifically examine the act on which project management practice is based, which we call the “act of project management.” In contrast to what we might cautiously call weak theories of practice (weak because their models are borrowed from other disciplines), these pragmatist theories could form the bases of strong theories of project management practice (strong because they are built from a project management standpoint). We must emphasize that we are not talking about weak theories per se that do not meet standards of scientific theory building, but weak theories in terms of the links that they assume, suggest, or posit with project management practice. Weak theories imply a less complex, oversimplified, or underconsidered theory-practice link. In this sense, we contend that pragmatist theories of project management are strong theories in that they attempt to refocus on the transfer from theory to practice and to grasp this transfer using a more complex dialectic.”

If we accept that theory substitution is really avoidance of the task at hand and is in fact hurting rather than helping us reduce risk, then we can accept the fact that the practice of project management needs to build the theory-practice link in the same way it has been built for other professions like engineering and medicine. With that realization we can move away from the current tradesman certification route to professional accreditation under an
intern residence approach similar to other professions who benefit from solid good theoretical foundations.

**Where is the PMBOK in this?**

The PMBOK, as a standard of project management, propels researchers forward so that the practice can improve. But, the added pressure to ‘find a solution’ can make research settle for less than it should. In short it circumvents what it would take to build a solid foundation. If we are to agree that project management needs a strong theory upon which to build a theory-practice link we can begin to end our cycle of chasing a yarn ball that often loses the attention of its sponsor before the game is over.

But that is not the direction of the herd of cats in this field. We can, for example, look at the publications of Starkweather and Stevenson (Starkweather, 2011, p.33) who argue that there is a plethora of theory from which to choose and it is a matter of choosing the one that fits your goal. In their case they choose a knowledge flow perspective as a theory by which they investigate the value of certification. With such laisser faire approaches to theory building, one needs to wonder about the editorship of the journals that are publishing in this discipline. Jugdev, rightly so, sees it as a problem in building good theory. (Jugdev, 2008, p 178)

“If publications are based on a set of assumptions and beliefs related to a theory, this lends credibility to papers and academics are more inclined to incrementally build on those concepts for future studies. Readers are also more inclined to accept and apply findings to practice if papers are from top tier rigorously peer reviewed journals. At present, project management has yet to be accepted as an established publication stream in the top journals.”
When the journals fail to provide a forum in which strong theory can be built, it becomes more difficult for practitioners to succeed in producing successful projects. Failing strong theory, practitioners will turn to canon and today that is the PMBOK.

While the authors of the PMBOK clearly state it is a guide not a canon, it remains a tool of tools that is perceptually akin to a carpenter’s toolbox. That perception has a ripple effect. If the PMBOK is a carpenter’s toolkit then the development of project managers akin to an apprentice learning a trade. This is a fundamentally different perspective from the one to which engineers and doctors must participate. Project management needs doctors not carpenters. Projects do more than house ideas, they impact human lives. It is in our interests to build PM professionals in the same way we build doctors and engineers; professional project managers that will aid in the reduction of project risk. Our analogy must treat projects like patients not houses. When projects die they impact more than the family that was to inhabit them. They kill jobs, reduce stock prices and hurt economies.

**How can pragmatism contribute?**

Pragmatism has an important role to play in the advancement of project management, not just in the pejorative sense but in the intellectual pursuit of extending philosophy of pragmatism to assist in building the foundation of good project management theory.

**The six against the four**

If we look for the intersect between the four characteristics of good theory and the six emphasis on pragmatism we find several intersections. In relation to power, pragmatism evaluates reality in terms of change and our knowledge as a means to take action. Power
looks to explain variety. By looking at phenomena in terms of change and how the
application of knowledge will act on that phenomena it is reasonable to say that pragmatism
has the ability to guide the characteristic of power in the development of good theory.
Knowing that practitioners of project management struggle with the management and
control of change, there is obviously room for research in examining this intersect.

In terms of testability, pragmatism has a great deal to offer. If the goal of testability is
to point out wrong predictions pragmatism will intersect on three key emphasis. First, it will
seek out the meaning of a belief by verifying the practical consequences to the point where
the consequence and the belief are distinctive. Obviously, a deviation in an idea will create a
tag in the theory. Second, pragmatism will measure the idea in terms of the success of its
action. Again, in seeking wrong predictions, determining value in terms of success can in the
negative determine disvalue in failure and assign a predictive value to it. Third, experience,
reason, and standards must be taken together to verify truthful action. This three legged
stool will not support a poor idea that attempts to takes its place on the seat.

In looking for the intersection between simplicity and pragmatism, this third
characteristic of a good theory has the advantage of the sixth emphasis, “usefulness to
achieve the intended purpose.” A pragmatist seeks only to simplify by reduction to a
verifiable and actionable essence. Forcing this demonstration assists in determining whether
an idea can withstand the rigor needed for inclusion.

Finally, in terms of fertility, pragmatism welcomes the new as a condition of reality. In
fact the philosophy is dependent upon it. Originally developed to explore Darwin’s Theory
of Evolution, pragmatism seeks out the changes in reality.
The role in praxis

If we, as suggested by LaLonde, look at the theory-practice link as a stepping stone building the profession of project management in the same way we have built other professions like accounting, medicine and engineering, then we need to address fundamentals in the application of theory to unique situations or phenomena. In the same way Kant’s pragmatic belief informs the physician, so must our pragmatic approach inform belief. It is belief that is at the core of professionalism. The carpenter believes he is a carpenter and because of that builds a house in a way that demonstrates craftsmanship. The doctor believes he is a doctor in a way that keeps him seeking out new advances in medicine so that he can address new diseases and save more lives.

It is pragmatic belief that is at the heart of a project manager’s praxis. This separates the project manager from all other managers. The practice of business management has always been free to choose from competing theories so that it remains innovative and responsive to market conditions. Great managers need to inspire employees. But project managers require more than that. In the same way an engineer pragmatically trusts his actions to create new devices that work every time because they are built to specifications laid out from the a priori disciplines of mathematics, physics and chemistry, project managers must have a canon of a priori knowledge honed by the theory of project management practice if they are to see the execution of ideas through to the end.

Project management is not best served by grabbing the idea of the day and betting the farm on it, nor it is served by rigidly adhering to the canon of templates that are at its disposal. Like the professions through which we achieve advances in science, the pragmatic project manager needs to engage in the theory-practice link and take part in the
epistemology that dialectically forces accurate thought to be tested in situated thinking. In the words of Lalonde:

“A pragmatist theory of project management is not concerned with a world of objects, but rather a world “of-and-as” project. This world-as-project is based on the “act of project management,” and it is this act that we have to theorize, describe, and understand. As such, the fourth type implies a different knowledge object that enriches and specifies the corpus of objects to be investigated in the project management field. It also complexifies our grasp of the act and gives rise to an entirely new type of theory that does not determine practice, but nourishes it. A pragmatist theory does not imply that scientific models should be imposed to resolve project conduct problems. Instead, it aims for a heightened rationality in proposing solutions to practical problems. In Dewey’s terms this means “making praxis intelligent” (Joas, 1993).”

**Conclusion**

Information technology has called our project management bluff. No longer can we pretend the project management required in construction shares the same skill set as the project management needed to create a real-time fraud system, a robotic eye, or a flight control system. We can’t certify project managers like tradesmen. We need to equip them like doctors. And that takes theory based on the discipline of project management not borrowed from business management, sociology, engineering or even medicine. It must come from its own experience to become a strong theory. With that theory we can engage the theory-practice link to build a new breed of professional; the pragmatic project manager.

In this paper we have looked at the current body of knowledge, known as the PMBOK. We have discovered what current practitioners are doing with the past twenty nine years of wisdom accumulated in the tome. Next we looked at the philosophy of pragmatism to learn what it can contribute to building a theory of project management.
Lastly, we examined the construction of theory and the development of professional disciplines to find out how we might create the pragmatic project manager (PPM).

The new PPM will have strong a priori knowledge, be able to analyze the current situation, combine experience with knowledge outside his experience, take action appropriate to the situation, and disregard erroneous ideas by applying theory built from the discipline itself, rather than attempt to fit the situation to the method used elsewhere.

**So how do we build the pragmatic project manager?**

Slowly.

We need to build pragmatic belief into the PPM; the type of belief that calls him to action with his knowledge of science, knowledge of the situation and knowledge of the practice of others. In the way Kant's physician must act because his belief guides him so to must our PPM act, applying the best of all his resources to act on the situation at hand.

The PPM needs a strong praxis honed by a well exercised theory-practice link.

That link needs to be grounded in strong theory.

That theory is made strong by the application of philosophical pragmatism to both experience and the ideas that posses the characteristics of good theory. By building the theory, good practice will follow. Good practice will strengthen good theory and the cycle will grow to become the theory of project management that is taught to all professional PPMs as they work towards a professional accreditation that gives them the authority to manage.
This is not a call for another degree. It is a call for research that is well directed, focused and founded upon the same path used to create professional disciplines of the highest callings. It is the building of a true science.
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