

# How Project Management Will Get Its Groove Back

*Project Sociology, Project Profiling and Project Potion*

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We are currently in the era of agile methodologies. Before that we had our plan-driven approaches. Software development had its structured design and its object-oriented design. I am not suggesting that they are all the identical, this is not an article about how we recycle the same ideas again and again in different packages. I am not even saying that they are all bad, or even all good. As our profession progresses and matures we can just add more tools to our project management toolbox for software development and implementations. We are all waiting for what the next big thing will be.

In the meantime struggling within the project trenches PMs are wondering which approaches to apply. What solution will bring salvation to their current project hazzard? For inexperienced Project Managers it can be hard to assess a situation, they have learned some “knowledge areas”, they have some checklist printed out on their desk, but are they going to calm down the Team Lead that just went out of his mind? For some experienced colleagues assessing the situation comes more naturally. They have seen it before, made some bad mistakes before and can shoot from the hip just by having the problem in sight. But can they step outside their previous experiences? Can they see the more fundamental problems that occur in their project? Are they aware of all the techniques that are available to help them out?

Of course, these are hypothetical questions. These questions address some of the more fundamental issues hitting the Project Management profession. And not only in software projects. But I think I have found a way out. A way that can survive, or more correctly absorb, the arrival and departure of PM and software development methods, and help new and senior Project Managers with the questions raised above. I don't have a final solution yet, but in this article I will lay before you the grand scheme.

The solution to the problem lies in the fact that most problems within projects are people problems and not technical in nature. Or as DeMarco and Lister put it (1999): *"The major problems of our work are not as much technological as sociological in nature."* In a project, it's the people that are the main cause of

problems. Time schedules, financial projections, and software goals may be abstractions, but it's the flesh-and-blood people whose work determines your project's status. It's the programmer that misses a deadline and holds up everyone else, it's the financial manager that goes berserk if you can't produce some good budgetary indications, and it's the key user that doesn't give a darn but didn't tell you about his dismal lack of motivation; these are the folks who can cause serious trouble.

Our main focus of attention should be on why and how individuals behave within projects, and how people interact with each other within this context. This socio stuff might not be the most popular subject among software technocrats, but it will provide us better answers, and even better, be more stable in the long run; the behavior of people doesn't change as fast as our technology. So, our first stop would be to create a model, or mental image if you want, on how individuals behave and interact within projects. I coin the phrase "Project Sociology" –If you look on Wikipedia (2007) you will find the following definition: "*Sociology is the study of the social lives of humans, groups, and societies, sometimes defined as the study of social interactions.*" That should do it. And never underestimate the power of proper theoretic foundation. People that are new to the profession should be first introduced to these concepts, instead of providing them with a list of hundred separate techniques. They can remember the model more easily, and deduct solutions from them more efficiently than browsing through their papers.

People operating in groups can be treated as social systems. And luckily for us, one can analyse them using techniques specially designed for that purpose. You can look for patterns that emerge, or trying to discover feedback loops that do not function properly. I will go in a little more detail later on, but for now I want to mention techniques like Systems View (e.g. "5<sup>th</sup> Discipline" from Senge, 1990) and even Goldrath's "Critical Chain".

On the individual level we have to deal with needs of people and how they are trying to fulfill them; here you are entering the hardcore psychology. And although psychology is not directly our field, they provide us with some very useful stuff. The closest thing we have within Project Management that approaches this is "Stakeholder Analysis", so that will be where to look first. By looking at group interactions and individuals we can quickly assess a project situation, based upon the Project Sociology. Speedy access to the problems is what we need to successfully run a project. I am a sucker for great names, so let's call this "Project Profiling".

Step one of problem-solving is getting to know the problem. That is what Project Profiling is for. Next stop would be finding the right solution to fix it. Enter "Project Potion". In my book "Surprise! Now You're A Software Project Manager" (DeBaar, 2006) I describe a way to use risk and stakeholder analysis to find a proper solution among methods and techniques available. The basic thought behind it, is that every technique is invented to solve a certain problem, to help

out in a certain situation. So, by defining the problem, you automatically have the link with a proper technique. Could be one heck of a job to find it though. With the results from Project Profiling, and the business priorities given to the project, you are able to tailor your approach suited for the project situation. In the book I use three aspects to look at: the strategy, the organization, and feedback mechanisms.

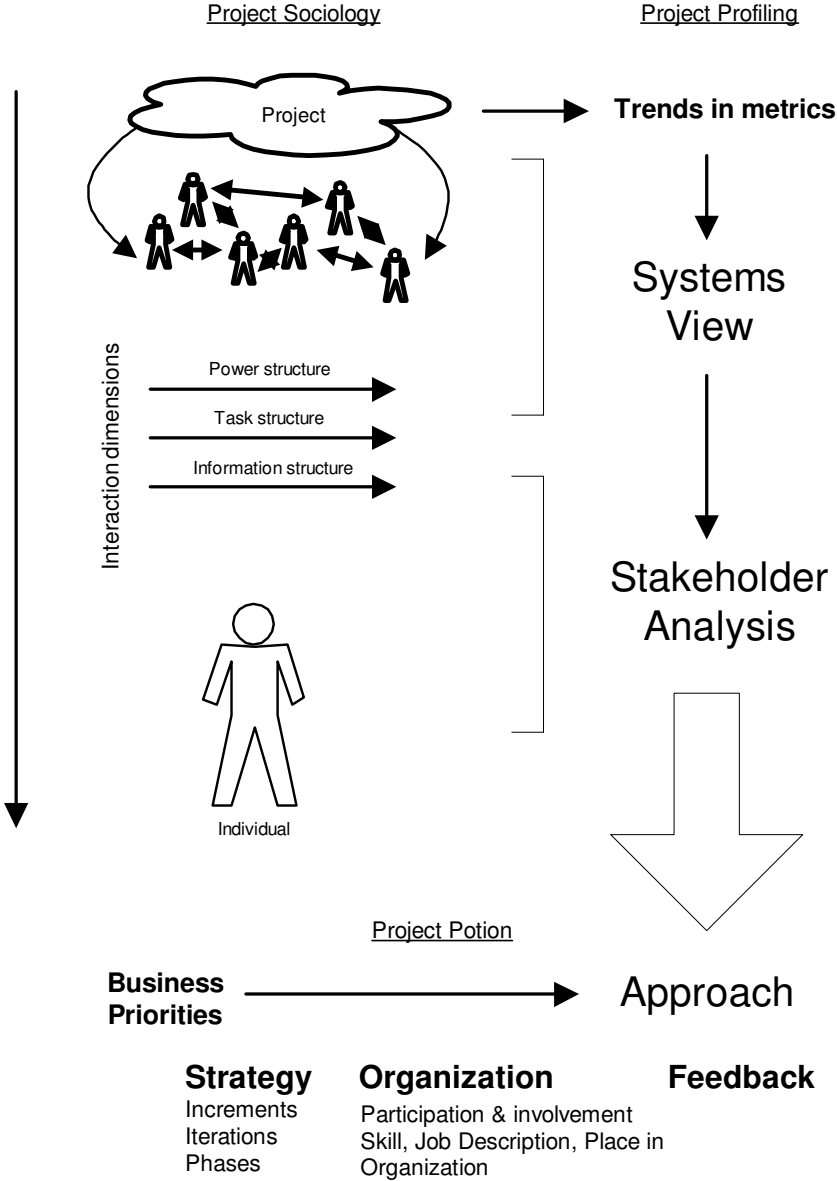


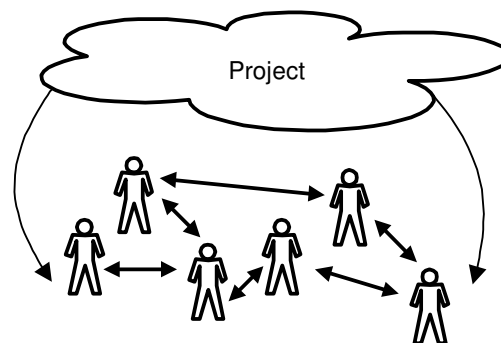
Figure 1: Project Sociology as model, Project Profiling to look for the problems, and Project Potion to find the proper technique to solve the problems.

## **Project Sociology**

Whatever your take is on projects, at the end of the day it is just a bunch of people working together to achieve a certain goal. During this endeavor to laugh, cry, pull pranks, play dirty tricks and have all other kind of behavior towards each other. If you are lucky they even work to reach the final goal. If you take everything away, and put people in the center of what a “project” is, you will see a group of stakeholders interacting with each other, just like any other group of people would do.

Just to make things easier on our lives, we call the result of all this behavior “the project”. In this sense it is nothing more than an abstraction. If we say “the project is late”, this doesn’t mean that some creature or entity from outer space showed up later than expected; it is the result of the project people working together that wasn’t finished on the time we predicted.

In this sense the word “project” is the same as “economy”. If our economy is improving, there is not some kind of energy force that is doing better than before. The whole system of people working, people buying and people living that is better off in some way than in the past. We need this kind of abstraction, just to be able to cope with it; it is easier to talk about the economy than about 100 million individuals. And the funny thing is that this abstraction influences the people that make up the underlying system; if the economy is doing better, people will spend more, if a project is late, people will work harder.



*Figure 2: the interactions of stakeholders “make” the project. The properties given to the abstraction “project” influence the stakeholders.*

If you try to define a project from this point of view, the best definition I know of comes from Doug De Carlo (2005): “A project is a localized energy field comprising a set of thoughts, emotions, and interactions continually expressing themselves in physical form.”

## **Interactions**

If we look at the interactions, some categories may come in handy to divide up the beast we are trying to conquer; it is always easier to cut a complex issue into smaller parts when trying to make some sense of it. For this purpose I will use the notion from Ancona and Caldwell who use three dimensions for interactions in teams: the power structure, the task structure and the information structure (source: Constantine, 2001).

The power structure can best be viewed as the hierarchy that exists, it is, if you want, a vertical dimension. The task structure is the structure that consists to perform the actual work; these are interactions that are needed to finish or start a certain task. If the previous dimension is vertical, you can think of this one as horizontal. And the last structure concerning information, are the interactions based upon the exchange of information. This dimension goes from left to right, from top to bottom, so in fact, going all over the place.

The power structure will contain subjects like hierarchical control and planning, the way people are instructed and how the boss is treated back. Concepts like authorization and responsibilities are handled within this dimension. The task structure can be viewed as the actual production chain, it contains all needed interaction to perform task and to create the products. And finally the information structure, subject within this dimension is how, what and when information is provided when the project people are communicating.

## **Individual**

At the lowest level we have to look at the behavior of individuals; why do they behave the way they do. This will provide us with insights in potential problems, and give us some clues on how to steer behavior in a more productive direction. Within psychology this is a much debated subject, but for the sake of our purpose we can use a simplified version.

From a very high level perspective the behavior of a person is determined by

- *Who he is*; “fixed” properties like age, gender but also personality.
- *How he is at the moment*; the current mood and health of a person.
- *What he wants*; the basic drive for people is to fulfil their needs. The need to feel “appreciated”, “respected”, “in control” e.g.
- *What he thinks will happen*; a person has his own mental image of what will happen when he performs certain behavior. These expectations are also factored in.

Given a certain situation a person wants to fulfil a certain need. Based upon their expectations they will choose a strategy that they think will bring them closer to

achieving that goal. In this respect, *a strategy* will be a sequence of behaviors performed by him.

An example. Some management teams can have a great resemblance with a monkey hill. Within corporate politics one wants to have a larger power base than the other. Managers don't want to lose face among each other, because that would undermine the need to feel respected and in control. So you get a lot of sabotage or cloaking behavior like:

- Covering Up Own Incompetence
- Undermining Another's Reputation
- Attempt to Build an Empire within the Organization
- Attempt to Maintain an Empire within the Organization
- Attempt to Increase Sphere of Influence within Organization

## **Project Profiling**

Most problems in a project occur when the project is actually running. This may seem obvious, but consider the amount of time spent on analyzing the situation and taking measurements to counter potential problems; the majority of this is done at the start of the project. When the project is running on full speed, when everybody is very occupied with their day-to-day work the need for analyzing project circumstances increases, but is hardly done.

Project Profiling attempts to create a set of techniques just for the purpose of quickly assessing a project that has problems. The purpose of Profiling is to detect the problems. The actual solution is left for Project Potion. The two main components from Project Profiling, Systems View and Stakeholder Analysis, are aligned with the models used in Project Sociology. The Systems View will focus on the project as a systems of interacting stakeholders, where stakeholder analysis will focus more on the individual stakeholders needs and expectations.

## **Use of Metrics**

Within Project Management we use a lot of metrics. We can use them as our dashboard. If we want to put this dashboard to real use we have to look at variables over time, because trends upward or downward, or even thresholding may suggest some fundamental problems in the Project System. For software projects you can think about:

- Schedule slippage
- Budget overrun
- Programmer productivity
- Size of backlog

- Number of change requests
- Number of bugs found
- Number of test cases performed per day

The metrics will provide some relatively objective “description” on how the project is doing seen from the top level. And as you will see in the next paragraph, it is a great starting point for the Systems View.

## **Systems View**

The idea to use a Systems View to analyse problems in projects dawned to me when I was introduced to Peter Senge’s „Fifth Discipline“ (1990). In The Fifth Discipline an organization is viewed as multiple "systems" (or you may think about processes) that interact with each other. The systems are not viewed as linear, but more as loops that keep on repeating, until some change has been done.

After extensive research Peter Senge, author of the book, found some patterns that were common among the situations he studied; a couple of loops that occurred in multiple situations: the archetypes. The archetypes are the stereotypes of organizational problems; the sweet girl, the evil stepmother and the jealous husband from organizational theory if you want. However, underlying the archetypes are three basic structures, the components that make up almost everything, the systems DNA:

1. Reinforcing Feedback Loops
2. Balancing Feedback Loops
3. Delays

By looking at changes in variables (the metrics) one can refine the problem situation using the several archetypes. By doing this, you are passing the superficial symptoms, and going straight for the problems heart.

But the „Fifth Discipline“ is not the only candidate that can help you out. By looking at the interaction dimensions (power, task and information) there are more system oriented techniques that help PMs analyse a situation. For example, the task structure is perfectly suited for Goldratt’s „Theory Of Constraints“ and his set of „Thinking Tools“.

The underlying idea is to treat the project as a system of interacting stakeholders. And by doing this, you have a very good chance to find the fundamental problems quickly.

## **Stakeholder Analysis**

Not every time, the real problem can be found in the interaction. In such a case the Systems View will bring your attention to the right spot, but not to the real fundamental problem, in the view of Project Sociology, the individual. With stakeholder analysis you will focus on the roles of the individual stakeholders, their needs, their goals, their expectations, and in the end their behavior.

## Project Potion

Based upon the analysis and problem definitions found using Project Profiling, you will have to construct your process in such a way the the problem is either solved, or its effects minimized. Different project circumstances require different approaches to ensure optimum effectiveness. As mentioned above, it is the people who largely determine these circumstances, and you have to tailor your software approach to the particular situation. For this you can make use of techniques and tools from different existing methods by simply mixing and matching everything together in such a way that you brew the right Project Potion for the occasion.

Within Project Potion create a project approach that reduces those risks and solves problems having three main tools:

- *Strategy*: What are the steps taken in the project, and what are the sequence and time frame?
- *Organization*: How is your project organization constructed?
- *Feedback*: How is the feedback to the stakeholders on the status and content of products and processes organized?

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