

# **Resistance and Accommodation of Project Management – A tale from the Ivory Tower of Academia**

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## ***Introduction***

Leading and managing knowledge intensive firms that are populated by scientists and engineers, has long been conceived as a major challenge (Etzioni, 1964). It is generally assumed that such high-level knowledge workers are badly suited for traditional means of control, more likely to respond to normative measures and unobtrusive techniques, such as the management of common norms and values, and the regulation of shared identities (Kärreman & Alvesson, 2004). Looking at the dominant form of management control system within government funded research in Sweden, this paper explores the role of the project as a tool/technique that has emerged as somewhat of a universal remedy supposed to respond to the challenges involved in leading high-level knowledge work.

As Damian Hodgson (2002: 804) notes, “the field of Project Management has promoted itself as a universal and politically-neutral toolkit of techniques appropriate for any type of activity in any sector, enabling the tight control of discontinuous work processes, with particular potential for the control of expert labour.” Add to this that the grand total of governmentally funded research for Swedish universities amounts to roughly € 4.4 billion annually (HSV 2011), or 1,3% of the GDP, and it may not come as much of a surprise that ‘the project’ appears to have become the preferred vehicle of choice for controlling government-sponsored research activities – for monitoring both scientific progress, and expenditures, and ultimately transforming funds to research results. With such amounts invested in research, the wide range of state-governed funding bodies arguably need measures that allow them to keep close account for their investments in our capitalist era, and that promise to subject the resources to careful and efficient management, yet retaining academic freedom.

By consequence, it seems, project management (PM) methods and techniques are unequivocally called for to structure, guide and control research efforts. Researchers are being forced to appropriate and use PM methodologies in order to become viable for funding. Grant applications are organised as project charters, requiring timelines, milestones, KPIs, strategies for dispersions of results, and so forth, before the designated research task has even been initiated; and the appointment of typical professional project management responsibilities, such as “Project Manager” and “Work Package leader”, are incorporated into the application framework. Additionally, the PM methodologies are reflected in reporting procedures, and in the handling of the research on a daily basis. As support for the latter, universities promote specific two- or three-day project management courses, geared towards junior faculty so as to prepare them for the challenge of running their own projects, and often given by external consultants who operate in close connection to national or international project management associations. We thus appear to be witnessing projectification of academic research, which is manifested in application

frameworks, in the taxonomies guiding the research efforts, and in the daily coordination and reporting of activities undertaken. Contrary to the apolitical image conveyed by the Project Management field – which posits it as a technology offering an opportunity to retain autonomy and independence – this appears to be a projectification that is in effect highly obtrusive, subjecting the research to a program (and indeed a managerial fantasy) with distinct political and ethical dimensions. In slightly different terms, we thus appear to be seeing an on-going process whereby researchers are enticed to engage with, and become disciplined by standardised Project Management tools, firmly steering them towards becoming professional project workers in an all but discreet manner (see Hodgson, 2002; 2005).

Our interest lies in exploring the workings of this disciplinary regime, particularly inquiring into some of its consequences for individual researchers and for research collectives. Supposedly, such a development sets the stage for a potential conflict of identities, between the role of the researcher and the role of the project leader – between an allegedly independent, open-ended pursuit of scientific knowledge, and a structured goal-oriented development process striving towards a predefined set of deliverables. We are, in other words, faced with a potential clash whereby researchers on the one hand perceive themselves and their research activities as being involved in a process whereby value unfolds in independent and spontaneous ways, and on the other as being involved in a process of most instrumental and tightly controlled value-creation. How these kinds of conflicts are being handled, and how the strategies for doing so affect how the research activities are played out, is the focal point of this paper.

Drawing on an empirical, interview-based study of academic researchers pursuing collective research projects in engineering, as well as in the natural and medical sciences, the paper addresses the dynamics of accommodation and resistance to the project management technologies deployed in these settings. The analysis is based on three interrelated empirical questions. First, we review and question *the politics and the ethics of the means to manage*, by critically dissecting the skill-sets and the methods used for running complex research projects within academic institutions. Second, we review and critically assess *the authority or legitimacy to manage*, particularly with respect to how project managers/coordinators obtain the legitimacy needed to apply, and actually effectuate a technology as obtrusive as the techniques and taxonomies of project management tool-kits. Third, we look into and interrogate *the identity work* involved in negotiating fantasies of freedom and independence with managerial fantasies of efficient coordination and streamlined deliveries by means project management technologies. The question guiding this part of the study concerns how researchers relate to project management technologies that posit themselves as mediating this potential conflict, whilst at the same time subjecting the work in academic institutions to a rigorous disciplinary regime. More specifically, the analysis sets out to explore what strategies are used to accommodate, rationalise and legitimise the utilisation of PM technology, and what strategies are used to resist, criticise and detach oneself from it.

To better understand the workings of fantasy, and how it is tied both to symbolic structures in the form of the tools and taxonomies constituting Project Management discourse, and to imaginary sensations, affects and emotions on part of individual researchers, the paper turns to the work of Jacques Lacan for theoretical support. As Jason Glynos (2010: 18) has argued, Lacan's way of conceptualising fantasy holds a unique ability 'to capture the combined centrality of both the symbolic and affective dimensions of social and political life'. Lacan's thinking is also central for understanding the ethical and political dimensions involved in the identification and dis-identification with the disciplinary regime encountered in the university setting, that is, in the strategies whereby researchers both accommodate and resist the on-going projectification.

## ***Theoretical framing***

In recent years, a critical perspective on professionalisation and PM has drawn attention to how the escalation of project organisations, and the deployment of PM tools in knowledge intensive organisations, has developed into somewhat of a professional discipline in and of itself. In doing so, it has pointed out that this development implies a higher degree of supervision and control and has far greater disciplining effects than is usually acknowledged by PM discourse. James Barker (1993) has for instance argued that a projectification of work has entailed a shift from hierarchical and bureaucratic organisational systems, by which control is exerted through standardised tasks and work processes, to concertive systems/forms of control, exercised through peer-to-peer supervision in self-managing teams. Contrary to the notion that project work entails a greater degree of freedom than the rational control systems examined in great detail by Max Weber (1905/2009), Barker suggests that concertive systems in fact are strengthening control in many cases – ‘tightening the iron cage,’ as it were. With reference to Michel Foucault’s work on panoptic power structures, Beverly Metcalfe (1997) has also emphasised how numerous technologies for calculating and evaluating the contribution of specific project members leads to increased supervision and control, and a distributed form of surveillance of the individuals subjected to this organisational form.<sup>1</sup>

Drawing more heavily on Foucault, and particularly his earlier work on power/knowledge, or *épisteme*, Hodgson (2002) has moreover showed how this form of managerial knowledge is inextricably tied up with power as a knowledge discipline in and of itself, subjecting both employees and project managers to rather obtrusive, albeit indirect, forms of control. Far from “an ‘objective’ and ‘abstract’ body of knowledge” (803) – which by levelling the organisation and allocating resources based on specific competences has detached itself from power and authoritarian means of control, as mainstream PM discourse often seems to imply – power has rather come to be embodied and enhanced in and through this discipline. As a professional body of knowledge, it enables a certain construction and ordering of the world that is aligned with the logic(s) endorsed by this body of knowledge, or “the ontology espoused by the discipline” itself, as Hodgson puts it (806). Models, methods and techniques, principles and formulas, dedicated concepts and terminology, which are part and parcel of this body of knowledge, come to be taken, to an increasing degree, as true representations of organisational and intersubjective phenomena, corresponding to natural dispositions, and inadvertently affecting the ways we think and the ways in which we perceive the world. By consequence, this knowledge formation fosters a belief in the transferability of PM tools and techniques from one context to the next in Hodgson’s analysis; it hegemonises work processes by monopolising the representation of them – sanctioning certain ways of articulating organisational processes, while delegitimising others (positing them as unprofessional by excluding them from the field, for instance). As conducting and constituting oneself according to professional ways of working, and mastering the deployment of these tools becomes a prestigious endeavour, entailing improved security and status, this discipline comes, moreover, to institute new hierarchical orders, and it becomes a central component for the formation of professional identities.

A Foucauldian analysis has thus pointed to how project management, as a discipline, has come to operate in a way that enhances the sense of being controlled by one’s peers, that

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1. With reference to Michael Rosen and Jack Baroudi (1992), Metcalfe suggests that the control of labour processes hence is becoming “increasingly hegemonic in nature”, and that: “Project systems can be perceived as ‘information panoptican’s’ (*sic*) and ‘saturated with measurement’”.

increases the vulnerability, reflexivity and self-discipline of the individual, and that regulates the identities, or the external and internal perceptions, of who we are. As such, it can be understood as a kind of knowledge whose power becomes obscured as it becomes embodied – in a certain body of knowledge, but also in all those bodies subjected to it, all those subjects that respond to its performative effects by internalizing a certain conduct. In a Foucauldian vein, one could thus speak about PM as a disciplinary regime or a form of governmentality that operates through a certain kind of biopolitics – a power regime that operates through bodily regulation, on our bodies as well as our sense of self and who we are (if not most intimately, so at least at work).

A slightly different way of putting it, inspired by the work of Jacques Lacan, would be to say that PM, in establishing itself as a discipline unto itself, whose toolsets and techniques are deployed in all sorts of organisations, imposes and establishes a certain kind of socio-symbolic order within these domains. One that greatly impacts and regulates the imaginary formations that constitute the professional sense of self of those subjected to it – the internalized or reified egos as well as the ideal egos or specular models of employees as well as managers relating to PM. To the extent that this socio-symbolic order replaces more authoritative power structures, it may be seen both as a permissive and liberating order. And to the extent that the project roles are promoted as more desirable than a position in a line organisation, it is one, moreover, that offers itself as a quite appealing form of organisation, which we might in fact seek to subject ourselves to. To the political dimension implicated through the Foucauldian analysis, we can also discern an ethical dimension here. PM is posited as the beneficial, the good.

Although Hodgson leaves the ethical dimension aside in his analysis, only implicitly implying its existence,<sup>2</sup> much of his analysis appears to rest on the assumption that the disciplining power of PM comes from its appeal, and that excelling at the deployment of PM tools and conducting to its professional ideals does indeed bring increased status to the manager or employee. Moreover does his analysis imply that the kind of symbolic order that PM imposes is/becomes the dominating one in the contexts where it is set to work – which is of course connected to the first aspect.

In the world of academia, which is the central concern in this paper, this does not necessarily seem to hold. The academy has often been portrayed as one of the most traditionalistic, yet autonomous of sectors; an institutional realm characterised by its own rituals and rigid ranking systems, held together by what Max Weber might have termed a clan-like power structure, with distinguished professors serving as patriarchal figures who take quite a bit of prestige in demonstrating their idiosyncrasies as well as their autonomy. Granting PhD students possibility for developing themselves and their scientific projects, rather than actually taking responsibility for their work, the notion of independence and autonomy is not only a privilege of senior staff, but spans across academic hierarchies also to junior researchers. In the words of Tony Becher and Maurice Kogan, it makes ‘out an essential socio-technical condition for good academic work’ (1992: 100).

When for instance Mary Henkel (2005) revisits the relationship between autonomy and academic identity, she takes it to be a central component of the self-perception of professional academics, and something that is constructed through a long process of internalising values, aspirations, sense of meaning and worth, language, theories and knowledge, that starts in the early phase of the PhD process.<sup>3</sup> To what extent the academy,

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2. In a later paper on a closely related theme, Hodgson speaks of “softer’ technologies of control” (2005: 52), for instance.

3. In the article ‘Scientific identity, occupational selection, and role strain’, Steven Box and Stephen Cotgrove (1966) describe three clusters of values that are central to this kind of processes, detailing publication and recognition, problem solving and personal satisfaction, and occupational advancement. A more detailed account of how this internalisation occurs can also be

and academics by and large, actually are as autonomous as popular accounts tend to maintain, is of course debatable. Ronald Barnett (1988) has for instance pointed out that the notion of the autonomous academic institution is nonsensical and has grown obsolete in our day and age. And against the backdrop of a Lacanian reading of subject formation processes, the entire notion of autonomy and independence becomes highly suspect, with the notion of the autonomous ego being a fundamental misrecognition of how our sense of self is in fact regulated through an intricate dialectical interplay with the socio-symbolic setting we are embedded in (see, e.g., Stavrakakis, 2010).<sup>4</sup> Rather than splitting hairs about the actual degree of freedom and autonomy in the academic setting, we can conclude, however, that the *fantasy* of autonomy has loomed long over the academic setting – which is also what academic literature on the topic bears witness of.<sup>5</sup>

As opposed to settings moving from bureaucratic forms of control towards PM, and to which the implementation of PM may appear as a liberating fantasy, the situation seems to be somewhat different in the world of academia, which already is marked by its specific version of such a fantasy. In this setting, we might rather understand the entrance of PM tools and techniques as the imposition of new, and relatively/rather rigid symbolic order, that implicates a standardisation of work process and reporting procedures.

In addition, this is an order that does not appear to be held in very high esteem by senior researchers and patriarchal professorial figures who head (/leading) research operations.

Hence, in this setting, we could instead be talking about the implementation of PM as a rather rigid symbolic symbolic big Other

Our main concern in this paper is how this ... What is interesting ... is what happens when this symbolic order comes marching in ... imposing itself on fantasies of autonomy and academic freedom?

... given that the status of the project manager is questionable. If academic settings are characterised by a split between the project manager and the research leader, the latter is presumably the one who holds the greatest esteem, while the project manager may be a post-doc researcher, junior researcher/lecturer, administrator, student, or what have you.

– As PM fails, the failure is taken to be a failure of implementation, rather than of PM itself, which leads to enforcement, in H's analysis...

Looking at the dominant form of management control system within government funded

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found in Charles Taylor's (1989) *Sources of the Self: the Making of the Modern Identity*, where he accounts for a moral in the form of obligations to others such as peers or senior academics, fulfilment or meaningfulness to the individual and dignity, respect and self-esteem which come through community acceptance, signalled in the successful negotiation of published article. Taylor (1989) argues that through entering into such conversations with people with a particular role or status, the individual learns to understand their role and become acquainted with the community in which they find themselves (see also Mulhall & Swift, 1992).

4. Although the evaluation of scientific activities by peers make out the cornerstone of academic success (see, e.g. Merton, 1957), and peer-to-peer pressure and social reputation are indeed strong components in identity formation processes in the academic world, the pressure to do original and creative work remains. Karin Knorr Cetina (1999) has for instance shown how scientific work demands of the researcher an ability to conduct explorative work in creative ways, and to imaginatively interpret scientific results.

5. One evident example is Henkel's (2007) article 'Can academic autonomy survive in the knowledge society? A perspective from Britain'.

research in Sweden, this paper explores the role of the project as a tool/technique that has emerged as somewhat of a universal remedy supposed to respond to the challenges involved in leading high-level knowledge work.

Now,

Creating, or coming to perform, their own truth...

Performative ... identity ...

... maintaining that project management is an expertise independent of its context, and at the same time denying that managing projects differs from one context to the next, bears witness of the way in which the transferability of project management tools is a central component in the identity ...

– In the case of academic project management, the Foucauldian analysis, and its emphasis on the power inherent to the knowledge discipline, does not seem to hold, given that the status of the project manager is questionable. If academic settings are characterised by a split between the project manager and the research leader, the latter is presumably the one who holds the greatest esteem, while the project manager may be a post-doc researcher, junior researcher/lecturer, administrator, student, or what have you.

Goffman...

Notes:

Academia as a last outpost of unstandardised work processes:

– Worth noting is that this does not mean that the symbolic order does not have a strong foothold in academia – formal titles, publication lists, the respect from your peers and socio-professional standing within the academic community are hard currency here.

– The imposition of PM into academia implies – at least according to some of the interviewees, who see PM courses as an important CV post – that a new order is added to the symbolic structures.

– In addition, the way in which it standardises work processes, or at least the staging of work to external stake holders, also implies that a new kind of symbolic order is brought into

Academia and power relations:

– Formal hierarchies like no few other professional domains; to what extent does PR obscure these orders?

– Foucault is brought into discussions of professionalism to counterbalance an interactionist perspective, which has concentrated on ‘the negotiated, processual and indeterminate nature of professionalism, and in particular the social construction of professional knowledge (Abbott, 1988) upon which professions are built’ (Hodgson, 2005: 52)

‘involves not only professional knowledge/expertise but equally importantly the processual enactment of professionalism, where ‘to be accepted one must have learned to play the part’ (Becker, 1970: 4).’ => a discussion around conduct

– The conduct of management, and the management of conduct... (du Gay )

‘induction into professions, in terms of both knowledge and conduct, serves to construct a specifically governable subjectivity rooted in self-disciplinary mechanisms (Grey, 1998) such that ‘professionals are both the instrument and the subject of government, the governor and the governed’ (Fournier, 1999: 285).’ (Hodgson, 2005: 53)

### ***Method, and empirical scope***

Academics from a range of disciplines, including neuro-science, material physics, informatics, immunology and cancer research, were interviewed in half hour to hour long sessions regarding their experiences of project management within and across their academic borders. The positions and length of academic careers varied from post-doctoral researchers (8) to professors (3), and included assistant professors (1), lecturers (2), curators (2), and (3) self defined co-coordinators (2 with Masters degrees, 1 with 2 years post-doctoral experience). Potential participants were identified in a number of ways, from registration lists for a course run at the university, Praktisk Projektledning (Practical Project Management), to an open invitation to researchers at the Faculty of Science and Technology. Of those interviewed, 12 had taken the course.

The interviews were conducted in Swedish and English, and transcribed in the same languages. During the interviews, participants were asked to describe their work, motivations and reporting activities with relation to the theme of project management. Nearly all found it challenging to define their activities as project based in what they described as the “traditional sense” but were confident in their understanding that projects happened in a much more prescribed manner outside of the university environment, and instead positioned their own activities against this. Several key themes emerged, including the repeated use of the idea that “we don’t work like that” and that science is by nature unpredictable and therefore unmanageable, but conversely management skills were developed naturally throughout the academic education process.

### ***Project management liturgy at work***

#### *Getting PM:ed*

Drawing upon our empirical findings, it can be argued that there in particular are three disciplining forces at play with regards to getting the academics in line with the project management program. Seemingly the most influential is the projectification taking place through the on-going projectification of research is through the compulsory specifications required by funding agencies. For instance one may throw a glance at the Swedish research council’s instruction for how to organise an application:

<b>“Research program (Appendix A)</b>
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Appendix A should consist of a brief but complete description of the research objective on no more than ten A4 pages, including references. Please note that any pages in excess of the number allowed will not be considered in the evaluation.

The research programme, as well as other appendices, **should be written in English** as the Swedish Research Council uses international reviewers.

The research programme must include the following information under separate headings:

**Purpose and aims.** Present the overall purpose and specific goals of the research project (or equivalent)

**Survey of the field.** Summarise your own and others' research, as well as previous findings in the research field. Provide key references.

**Project description.** Summarise the project's design. Describe theories, methods, timetable, implementation, as well as the function of co-workers (if any) in the project.

**Significance.** Describe the project's significance to the research area, especially with regard to innovation and originality.

**Preliminary results.** Describe your own experiments and pre-studies in the research area.”

By following the guidelines, thus making oneself eligible and attractive for funding, the proposed or on-going research becomes told in the terms of project management language. Timelines, responsibilities, work packages, reporting structures, budgets and so forth must all be accounted for in order to succeed in the first step of receiving funding. Any requests not in line with the above mentioned structure and with the prescribed content would, as it is stated be disqualified for further consideration.

“In most cases yes. I mean in the EU projects the 7th Framework projects there are deliverables specified, and you're supposed to have a plan for the impact of the research, and that's also the case for most of the other projects... So most of our projects are rather well defined in terms of deliverables and things.” Co-ordinator, Immunology, Genetics and Pathology

“Yeah, usually they write it in the announcements and then they also judge the application, based on what it is striving to, if the goal is to get the knowledge, I mean the knowledge can be very abstract, it can be the 15th decimal of something that we are measuring. And then it can be something that leads to a commercialisation path and then a start-up of a company and so on, so it's very different and those who finance it, they always look so those who want to fund fundamental science they don't like applications where people to try say ah this is something we want to do a company on and so on and visa versa. So you adjust yourself and whatever you apply for.” Senior lecturer, Nano technology and functional materials

### *Getting PM:ed through reporting*

Second to the funding application, a similar disciplining process can be observed in the mandatory reporting instructions, i.e. when a grant has been won. Now distinct regulations organise and align both the content and the language in which research is communicated. What will be evaluated can for instance be stipulated as follows:

“4.1.1 Evaluable goals

The entire program will be evaluated for the following items:

- assets of industrial production-related R & D in Sweden
- The degree of collaboration in the automotive industry and between industry and academia (college, university, institute)
- The scope of the project results used to improve the participants' production systems
- The scope of the successful implementation of demonstration projects
- The number of new academic degrees in relevant fields
- The number of new courses for students, graduate students or professionals
- Number of industrial workers who have been significantly enhanced skills through the program's auspices
- The number of new patents and numerous published industry standards

Each of the activities and projects shall be specific, measurable objectives that are related to the content of the individual project. These goals are to operate in the same direction as the MERA program's overall objectives. Individual projects do not work on all assessable objectives for the program.

In addition, the program is evaluated on qualitative items such as:

- impact on the Swedish technology development and the Swedish production system's competitiveness,
- how far the program has helped to increase the quality of the production engineering education in relevant engineering program."

### *Getting PM:ed through getting taught*

Formal disciplining processes are a significant factor in many of the views expressed by the participants. One such process is that of project management education, particularly designed and directed towards younger faculty in order to prepare oneself for taking managerial responsibility in future projects. At Uppsala University, the following is advertised at least two times a year for all interested faculty as well as university administrators.

At Uppsala University, researchers and administrators from the university can apply for a three-day project management course. The course promises to provide a practice close guidance of necessary tools, techniques and terminology to make project life easier for the apprentice. The course, which is provided by a quite known and influential project management consultancy firm is heavily subsidized by the university. Of the total fee of approximately €2000, €200 are paid by the participants own department. The other €1800 is paid by the university centrally. Two courses are provided each year with approximately 30 students each time. There is a substantial mix of participants in the course, from full professors to PhD candidates and full time administrators, including those only within academia and others who are involved in spin-off organisations. The majority of participants over the last two courses are however, PhD candidates, full time project administrators and young researchers who aspire to become research leaders in the future.

### *Resisted Accommodation*

A slightly paradoxical observation from our material is how the respondents rationalise their participation in the course. Especially for the younger faculty, the PM course is a CV enhancing paragraph, similar to the courses in pedagogy and in tutoring PhD students. However, whilst the latter courses are a requirement for a permanent position and often appreciated as supporting a teaching career, the project management / co-ordination position is not considered to be of any prestige or provide any visible leverage within the academic hierarchy.

“Honestly, I wanted to have it in my CV. That I took the course. But I think that I appreciated it .I think I learned a lot of things. But if you apply for money its good to say I want to have money for a project and I actually have experience in that. But it is useful. I recommend people to take it.” Assistant Professor, Applied Materials Science

“[...]but I think that sometimes it’s a little bit of a waste of time and I sit there and I could be here and supervise instead but I mean it looks good and I’m sure I got something out of it.” Researcher, Applied Materials Science

A common theme among the respondents is the perceived tension between projects and project management according to the course and what it contains in the participants’ daily life. A researcher on the course a few years ago and a researcher on last year’s course both described how the class argued with the teacher about how relevant the course was to their research activities and requirements. The time between these two incidents might suggest that the course is taught according to industry PM expectations and the course designers are unable to alter the tools and/or teaching to better relate to the academic environment.

“ [...]but I think that sometimes it’s a little bit of a waste of time and I sit there and I could be here and supervise instead but I mean it looks good and I’m sure I got something out of it. Sometimes I think those courses take a lot of time, you know what was lacking, those course are a lot of times made for companies. [...] University is, I can’t really explain, but its like university is very different from companies, you don’t have the same, you do have this hierarchical where we would call structure but you, it doesn’t really work the same its not like I mean at least how I’ve you know had it since I’ve started, it might be different in different departments, I mean you have the professor and there were a couple of seniors beneath the professor and then we have our groups and our responsibilities and my group does stuff that the professor doesn’t really have any clue about, he cant really contribute or he cant, so you kind of, I don’t know the system sometimes that they talk about in this project management courses, how you report and they talk a lot about this hierarchical structure and how, and that doesn’t really apply in the same way I think at the university”. Researcher, Applied Materials Science

### *The elusive label of projects – time*

Nearly all of those interviewed found it challenging to define their activities as project based in what they called the “strict sense” but were confident in their understanding that projects happened in a much more prescribed manner outside of the university environment, and instead positioned their own activities against this. Although some had only an academic career rather than industry experience, most had contact with industry in some way, whether through collaboration work or spin-offs. The respondents were asked to describe a project they were working on, providing details such as financial scope, the number of researchers involved, external collaborations and time span. The most commonly noted characteristic of the academic project was the absence of a fixed start or end time, distinguishing academic work from industry projects. The closest those interviewed could equate to a start date was that of the funding being approved or the PhD student being admitted, and the end date the submission of an article to be published, the submission of a report to financiers or the defence of the PhD thesis, although again individuals could not identify these activities as projects in what they perceived as traditional project management. The length and nature of the *academic project* differed greatly, described variously as:

- an educational phase in the training of a PhD
- an investigative project spanning decades and involving large numbers of

- researchers and collaborations
- a financial term
- a publishing period

There seems to be a natural duration of projects that are also aligned with how the project purpose is understood. The shortest project is for instance defined in terms of a paper and so the research goals that are pursued become translated into the effort of article writing and publishing.

“Does it have a beginning? Does it have an end? I know a project is supposed to have a clear beginning and a clear end, that’s not how it works here so in the strict sense of what a project is it’s not really a project but we use that word all the time, and well it sort of has an end right now since we submitted the paper but we also know how to continue with this project, but you can call that the next project then I guess.” Researcher, Neuroscience

A different project duration is linked to the financial year. This is not so much connected to outcome but to administrative structure. This coincides with the process of funding, particularly for researchers with a doctorate who have a non-permanent research position; such personnel are funded annually.

“Well the Stint project is a 3 year project where I get money for 3 years, the Vinnova is it 3 or 4 years, I can’t remember. It’s either 3 or 4 years on that one as well.” Researcher, Applied Materials Science

A third stable project duration uses the calculative base of a PhD-candidate, that is four or five year project depending on the funding solution specified. It can be noted that this duration module actually pragmatically defines the duration of larger projects, for instance a project run by a centre. A senior professor in material sciences explained:

“Interviewer: How long is [the project]? It is not well defined, this is via a centre and this means that the centre has the freedom to control project duration, the centre is a long time. We have two graduate students where the idea is that they should be able to study for a PhD on this project. So we can guess that it will be just as far. So a five-year project duration. But it is by no means well defined.” Professor, Microsystems Technology

For post-doctoral researchers and professors there was a more personal and intellectually based definition of the project. These individuals were interested in the development of their own and their research field’s understanding of a scientific phenomenon. This longer-term view was reflected in the repeated use of the word project to describe researchers’ activities whilst positioning those same activities against what the researchers perceived industrial projects to be. The use of the term project in this way might suggest a more abstract, undisciplined understanding of the academic world:

“Well then, it’s research, we call it the project although it is perhaps not projects. It’s little different projects, but all are in biomaterials, but one that is about developing a course an online course on IP and innovation. The other projects are pure research projects so that there is a project to develop bone cement, which is for the stabilisation of spine fractures type that effectively reduces disability process. So it’s a project I’m working on lately. Then I have a project, what we have more, we have dental projects, and we’re talking about developing surfaces on metal implants. There are various projects some are as under one umbrella, one can say. So it is several projects in one.” Assistant Professor, Applied Materials Science

### *The elusive label of projects - task*

As any scholar of projects and project management knows, there are many types of projects: long ones and short ones, unique and repetitive, complex and simple, R&D and delivery etc. Drawing upon our empirical pool of respondents we can observe a large variety of things that are ostensibly defined as projects, sometimes with the added comment that it does not correspond to what was taught at the last project management for researchers course. Here follows an incomplete list of projects according to everyday researchers:

- a paper or a handful of papers to be
- the 4 or 5 year work of a PhD-candidate
- a set of PhD candidates work for a professor
- a professors work of coaching a PhD
- a request for funding
- an effort to understand DNA sequencing

A triple post doc with a small group of his own in molecular biology, may exemplify a very common view of projects:

“I think that the, to start with, the project, the definition of the project is for me quite different from what the course was choosing, but I mean we discovered that in the first 5 minutes of the course. So I don’t really have projects, the main aim is to establish disease models using a certain cell type and then there’s lots of little smaller projects, but we call them a project that can go on and on and on and on!” Researcher, Immunology, Genetics and Pathology

The practice of naming activities as a project helped some researchers to cope with what they perceived as a significant gap between the nature of university and industry.

“... and partly I thought it was stupid. Sometimes I think those courses though a lot of time, you know what was lacking, those courses are a lot of time made for companies. And this one, it wasn’t, you couldn’t apply all of the stuff she was teaching and she claimed and you know, how you should work as a project manager, doesn’t really work at the university. It’s like university is very different from companies.” Researcher, Applied Materials Science

On the other hand, there is a felt need for project management discipline, at least from the lower echelons of the research hierarchy.

“I would like to have it a little bit more structured already from the beginning. My feeling is that sometimes ideas just pop up other time along the way and maybe it’s better to try to have a really good brainstorm meeting and then work from those ideas. At least it would be fun to try to do it that way and compare it to the way it’s been done right now. Not sure it’s better but I would like to try to have more clear phases of the project.” Researcher, Neuroscience

In answer to a follow-up question regarding why this does not already occur:

“Tradition? This is the way it’s been done for forever. And I’m not a group leader so I can’t really go in and do it my way.” Researcher, Neuroscience

### *The (junior) need for structure*

To some degree though, especially among younger researchers, project management techniques are seen as something that could make research more efficient, as discussed earlier. Several respondents conclude that they would benefit from more structure (according to the mentioned techniques) but as long as some senior research leader is calling the shots, the “old”, fuzzy way of work would continue. The need for better organisation seems to rest on two pillars. One is a suppressed feeling of mismanagement and fuzziness of senior research leaders. Secondly, there is a perception that research projects within both biology and engineering are becoming larger, incorporating more people and research groups but also more universities and industrial organisations. Thus, there is an increased ‘functional’ need of more strict coordination and organisation.

#### *Division of labor – front stage & back stage*

So why could the industrial project management models not be transplanted into academic research? From our study we can note that, contrary to “industrial” project management, there is a clear separation between leader and co-ordinator/ manager. In this context, the project leader generally is a senior researcher often an influential professor within the research division. He, the project leader, (it is generally a he) is the one who defines and controls the project goal, resource allocation and dispersion of results. The second position on the other hand, referred to as project manager, work package leader or project coordinator is a position that has most or all of the administrative responsibility.

“Well, it creates a lot of work! But, I guess my role is a bit special, since I’m doing very many of these components and am responsible for getting many things working, but I’m not formally responsible for almost anything really. ‘Cos the professors they are the PIs, they’re scientifically responsible then we have the administration over here, they’re doing the actual financial administration in the, that the systems and the personnel. I’m linking all this together. So it’s, it’s sort of a double role. And sometimes it’s frustrating that I can’t make any decisions myself. I sort of, I make the decisions but then I have to go and tell the boss that he has made this decision sort of. But then again in the end if something goes wrong I’m not responsible either.” Co-ordinator, Immunology, Genetics and Pathology

“Some, we are well multiple project managers can say that you pretty much can not be but that happens you have to take different roles in larger projects, for example. Then it’s a lot of projects where I am a leader but I may have delegated a lot of project management or what to say to someone else. Yes a bit like that.” Assistant professor, Applied Materials Science

It is the project manager who is in charge of the accounting and reporting functions of the project. This person, again if we look at our study, is often a junior researcher, a PhD student or, in some cases, even an enrolled administrator. Such division of labour is of course not unfamiliar within other “industrial” settings. It is more a question of how positions are labelled. However, the separation observed here effectively separates the project from the project management methods and techniques that are supposed to guide the process.

Research leaders have usually outsourced practical co-ordination and administration to junior researchers, preferably PhD students. This task is yet to receive any credit within the research community or university organisation at large. The task of management and co-ordination is something that is ordered rather than sought. A docent in bio toxicology and now a full time project coordinator for a very large collaborative research program on DNA notes:

“For a smaller research group the professor would do most of these tasks, and the, maybe some would be done by the actual administration and some stuff they would force the PhD students to do. But I guess it’s a function of, that’s grown too large, so the professor doesn’t have time and he doesn’t have that overview of it. And he has, they have realised that since they sort of can afford it, they will, it would be more efficient to have this as a separate role. “Co-ordinator, Immunology, Genetics and Pathology

“And because traditionally you have the, its really divided, either you’re a teacher professor or you’re an administrator. But to get this working you need people with both skills and I mean I have the, a high academic qualification but I’m interested in and have the, learned to do this other part as well. It’s not 100% recognised by the university that this role is important but I think it is going to be recognised as more and more important. “Co-ordinator, Immunology, Genetics and Pathology

### *Talking projects – doing research*

The accommodation of project and project management as taxonomy, tools and techniques is in general seen as quite awkward and thought of as something unnecessary, a necessary evil, imposed rigidity or just not appropriate to the work at hand. One aspect that is heavily defended is the idea of research as being something qualitatively different than any particular projects. They are but components of something bigger, more stable and continuous. One way of protecting research as something different is by making a very strong distinction between what the researcher is doing when (s)he is involved in getting funding and what (s)he does when doing actual research.

“Yes, because I mean every, well most research projects they have to be funded, there’s somebody who’s knows better than we what we should do. And that is something that is sometimes a real problem, because the funding people want us to do something that is 5 years out of date at least. Well, they cannot tell us say that I mean we have this research program to work on this and that, unless they have to know what to set up the research in, how do they get the knowledge, well they get it usually from reading, popular more or less popular scientific magazines who get their information from somebody who wrote scientific papers, papers that took typically well a year or 2 to get published, based on research that was done before, research based on the some researchers’ ideas, ideas that came out from some discussion typically at a national conference. The span between the idea there and when the funding people tell us you should work on that, it’s 5 years!

So a lot of, I mean, now when I look back and see which of my papers have been cited, I mean I’ve published something well between 4- and 500 in the ISI based, many of them came from research that wasn’t funded, where we somehow used or misused money and did something that was our own idea, we could never fund that kind of research if we apply and it goes through a reviewing process and so I mean this is a real problem. We are forced not to do our best.” Professor, Solid state physics

“And that’s, that’s a big discussion whether scientific products should have clear defined goals, and is it good science if you know 5 years in advance what you’re going to deliver? And the EU projects they are built in that way and they have a specific aim that you should be beneficial to the European population, their health or the European industry, things like that. I guess it’s valid to some extent, its paid by the European tax payers but maybe it’s not the best science and we’re trying to do both cancer projects, we would like to have more open money to show that we have a good idea and a good track record but we’re not gonna tell you in advance what it’s gonna end up with. And, but that’s also individual. Some people are, have adjusted to this but the professor the main PI, he’s, he wants it to be the good old days, when you got your funding and you delivered and then

you got more funding and you didn't have to specify in advance." Co-ordinator, Immunology, Genetics and Pathology

The notion of project management, especially by more senior researchers, is viewed as part of necessary public displays associated with obtaining and satisfying the requirements of funding. What we observe is thus distinct acts of separation, between Research and Projects and between *doing research* and *attending to funding requests or to funding related reporting*. The intermixing of the instrumental project canon and that of research activity is thus kept to a minimum.

"Yes, we try to do or we have to do, but the basis is this interest in developing new molecular tools and that's what the PhD students are eager to do as well. And some of them are doing more applications stuff, but most of them. And then of course we need funding and most of these external more than 90% is external and that you can find a call that suits you reasonable well and then you try to bring in your own ideas or sometimes we try to, to work proactively and so we try to influence what calls there are going to be available, and, but in some cases we're not really 100% interested in doing what we got the money for, but we, we're trying to of course achieve that and deliver, but also gain in sort of the core business." Co-ordinator, Immunology, Genetics and Pathology

As a consequence we see the research community on one hand embracing the practice of project management through CV maintenance, projectifying research proposals for funding and well as for reporting, whilst at the same time separating their own work from project management.

"No 'cos I don't have, we don't work like that. We don't have deadlines and we don't want to report in that way." Researcher, Neuroscience

"Sometimes one can, one can do good research, but it sometimes is controlled too much. Have to report details, how many hours have we worked and this and that. Well research is not done by the hour. It's a meaningless concept. I don't take off my head when I go home." Professor, Solid state physics

Some enthused about the benefits PM could bring to their research and academia, actively incorporating the tools and thought processes into their activities. The same Neuroscience researcher who declared "We don't work like that" displayed her project plan whiteboard:

*NOTE: Insert picture 1.*

One reason for this distinction between academic research and industrial PM could be the established norm, ideals and identities of science and the researchers. On such example is in the deliberate misuse or perversion of traditional PM tools in applying for funding. The accepted methodology in academia is described as follows:

"But usually here it's the other way around. You know that from the funding agency you can maximum 2 million and then you apply for 2 million and count backwards to fill it up with tasks and the people, so you sort of by default almost ask for the maximum amount. [...] It's to maximise the external funding, basically. [...] And also to, but to some extent the more money we get the more things we can do. So it's not really, it's not made up, it's not pure inventions, but it's a, it's just thinking a bit backwards. We can always spend all the resources we get and then we show how we're going to do it, instead of saying we have this aim and then we just need 800,00. And in almost all cases you get less than you ask

for anyway, so you never you must never have full funding coverage, that's also the reason why you start from the different end and try to maximise it and then you get less and maybe you can still do what you planned to do, hopefully." Co-ordinator, Immunology, Genetics and Pathology

Another example is the negotiation of deliverables, incorporating flexibility where possible, perhaps to reflect the perceived need for freedom in science.

"The risk, when you have projects with scientists and it has nothing to do with that they are scientists passé but it has to do with that funding among scientists may be, is that researchers may perceive funding as much freer than it is. And they think that they can basically do what they want instead of what they need." Professor, Microsystems Technology

"Well that's also, in the EU projects those demands are higher than in the, it's sort of a falling scale you have Vetenskapsrådet that's basic science, and then strategic science foundation maybe have a little more and then Vinnova and EU grants have even higher demands, but those to some extent it depends on how you write the proposal and how you formulate deliverables. And project. And usually we try to make the deliverables so that we can sort of we know that we can achieve them and we don't get stuck into very specific like we don't say we're going to increase this by 25% but we give a range instead so that you can control that yourself." Co-ordinator, Immunology, Genetics and Pathology

"There must still deliver what we promised to simultaneously so we want to as well as urge and encourage this so that it is a very good time if you're not constantly have deadlines within the project. We try to keep a somehow slightly slower pace then you can say, we do not want the project when all the time to deliver results and stay on the road with these deadlines, then you have not this freedom of research that we think we should have because it is good for all parties, so to speak. Somebody had time to think and time to follow up the loose ends." Professor, Applied Materials Science

One reason that the understanding of the project as a particular mission is generally quite vague within the research community is that funding is heterogeneous. Research efforts are often cross-funded through different means of funding. This for instance means that particular activity specific funding (lesser project funds) are blended with more general external as well as internal funding. A research groups' activities for the upcoming time period may be funded by a set of funding bodies with different requirements and interest in follow up and control. This external pressure on the researcher and the research group from the university and financiers to produce such different outputs might be one factor in the strength of the researchers' identification with science as a discipline that cannot be tamed.

"I really, for some somebody outside the university the greatest challenge is to actually keep to the project plan sometimes because you're, I mean science is all about, we're all researchers, it's all about guessing really. You kind of read a lot of things and then you come up with your own idea, but it's, it might be a qualified guess but it's still, it's kind of a guess and you play around and so a lot of times you write something and the most difficult thing is to keep that track and not, do something else. But that is just natural for us." Researcher, Applied Materials Science

"Yes, in that I largely controls what research we do and what choices we make in basic research, so I control also what results we will focus on and it's the results that we get that govern what we will pursue. So where I have very much to control." Researcher, Nano technology and functional materials

“There, I see great opportunities, because once you discover it, or make a new measurement, a new result and discuss it with colleagues. And if you want, and press and says this it strikes me as very interesting and exciting thing I think we should go in this direction when it is usually easy to obtain with colleagues and managers in that direction. I see this as great opportunity.” Researcher, Materials Science

“Huge, I can decide exactly how you want it to be. But it is clear that it is because it works so there must surely be in agreement. But otherwise, I would say very great impact. To go where the results show, you never know where it will be interesting. There may of course be that you actually can not control really over if the project goes a certain way, you have to maybe follow it there whether you like it or not.” Post-doc, Department of Medicinal Chemistry

“My feeling is that sometimes ideas just pop up other time along the way and maybe it’s better to try to have a really good brainstorm meeting and then work from those ideas.” Researcher, Neuroscience

“... because it’s this is how it works in science you can always have hope but how it will end up you can never know.” Post-doc, Immunology, Genetics and Pathology

“If we have meetings we discuss science because that’s what we have to do... we don’t have that type of time to discuss... its not just we can’t decide that this is the start like you, you ask are you going to fulfil your whatever, we cant decide because all of a sudden we notice that we wrote in the application that we were going to try out this material, what if the cells or what if the body hates this material? And we would die if we would put it in the body, we can’t really continue on that right? We have to go back and just start over again.” Researcher, Applied Materials Science

One researcher commented on his thought that PM was something that came naturally to researchers (AM), perhaps suggesting they didn’t need to be trained in this field. It seemed that the natural progression from a new PhD to a professor gifted the individual with the capacity to seek and apply for funding, demonstrate an understanding of research requirements and methodology, as well as a natural understanding of how to run both a research project and an academic environment. (Could we say that this is some form of observed learning, perhaps with some of the delegated activities of senior staff?)

“I think scientists are bred in some way that they should be capable of planning, executing and reporting whatever they do. And I think it falls quite naturally into the management skills that one would require, especially when it comes to planning and so on and coordinating with the other actors, whether they are part of the lower chain or you end up somewhere higher up or function as a node it’s a different thing but yeah the academic environment is such.” Senior lecturer, Nano technology and functional materials

The core of doing research and being a researcher is heavily defended through the creation of project management / coordinator positions that are low-prestige, either for PhD candidates to their part of departmental work or even as explicit non-research positions. The project manager or co-ordinator becomes heavily circumscribed or even excluded from influence on any daily work practice, leading to a conflict when the individual is influential through their everyday research practices not associated with project management.

“Yes because I’m new to it and then I try to do everything because I’m not also leading I’m sort of also sort of a member of the staff and then that’s very difficult, I’m just a half time here and that is a really tough thing to do. And then it’s not only running a project

it's also supervising people, so it's lots of different aspects to the project.”

“How do you define or separate your roles in that?”

“I don't! Because I think it, if I've tried to make a good supervision it should of, the project as it should benefit from good supervision because the people should be then more on line with the goals and it sort of should solve itself, I hope. And it's a time issue also, it's, I can't do it another way, I don't manage to do more. I have to sleep!”

Researcher, Immunology, Genetics and Pathology

## **Discussion**

From our empirically grounded tour in projectified academia we can draw several tentative conclusions. First, project management as a disciplining force has yet to significantly effect the daily work and habitus of the research community. However, despite weak effects on daily research practice, the impact of and industrial projectification logic on research organisation is clearly noticeable. Project management practices are neither embraced or actively resented, at least not in any traditional way such as active or passive work place resistance (cf. Fleming & Sewell, 2002). Instead of deflecting control either as old school class struggle (see for instance XX) through subtle but still antagonistic interpersonal means such as irony, svekism (XX, Fleming & Sewell, 2002), flanneling, foot dragging etc., control is rather deflected by separating research as talk and action. We would claim that control is deflected through carefully orchestrated acts of consent (cf. Ashcraft, 2005). In our case this is achieved through coping and separating. By coping we mean a quite adaptable and open approach to accept and accommodate new imposed means such as the disciplining canon of PM, its taxonomy, tools and techniques. However, coping does not imply a full accommodation to actual practice but rather a partial and carefully controlled embrace.

One may view this in terms of creating a front stage and back stage of research (see for instance Guillet de Montoux, 1999). Talking about research (for instance funding applications) and talking about doing research (for instance reporting) becomes part of the front stage. Research and the doers of research on the other hand withdraw into the private and opaque area of back stage work. Projects and project management practice becomes associated with the front stage. Here research is described and administered rather than managed by (unlucky?) administrators with a PhD position or a PhD degree.

Back stage research continues to be pursued on a daily basis according to the discretion of established and upheld by research leaders. Here it can be noted that such management practice is quite diverse and closely resembles the style and personality of the usually older white male research leader. A telling example of this suggested split between front stage and backstage is for instance the reply from assistant professor X doing studies on mice:

“Interviewer: So do you use the initial project, funding application plan, do you use that in your work throughout the project, or is it more of a guideline?”

“No. That's used when I apply for money and then each year I have to follow up and present to them, which goes I achieved in my project plan, so then I go through it again and I report back to the ones that give me money.”

An interesting conclusion that may be suggested is that the privateness and opaqueness of what researchers desire and how they go about pursuing their ends may actually be even more an esoteric question than before the increased disciplination of PM standards. [...]

Taking a somewhat more speculative turn we interpret the stability and functionality of the front stage–back stage construct as resting on a, at least tacit, consent that includes front stage counterparts such as funding agencies, policymakers and other stakeholders. For

instance, the national research agency, Vetenskapsrådet, from where parts of the application instructions were presented earlier in the paper, requires well-organised applications according to the project management 101. However, little or no reporting is required when a funding request is granted. Our understanding of this set up is that there is a mutual understanding not only how funding is distributed but also that there is a discrepancy between how research is talked about (front stage) and actually is carried out (back stage). The divide between front and back stage would not function if the concerned parties to some extent accepted and understood this division.

Wrapping things up, we can conclude that the project management canon – on a superficial level is easily established and accommodated within the ivy and ivory garden of Academia. However, this accommodation seems superficial in many instances and, notably, carefully circumscribed. We can note that an important part of this defusing process rests upon the creation a new type of position/professional – the professional project coordinator with a PhD degree. Funding for such positions are nowadays automatically incorporated in application guidelines, particularly in international initiatives such as the EU-level. This new breed, the masters of the front stage research arena, seemingly play an quite yet uncertain and undecided role in the academic hierarchy. Through these front stage clerks a substantial portion of project management as disciplining force is caught up and neutralised on Academia's the front stage. Back stage words and labels such as projects and project leaders also exist but carry a variety of varying meaning. Business goes to a great extent on as usual, dictated and orchestrated according to established practice and whims of senior research leaders.

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