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Forty Years of Organizational Behaviour Research in Project Management.

Introduction

I have been asked to write an essay on 40 years of research in project management as part of the celebration of the 40th anniversary of the International Journal of Project Management. I plan to focus on research into organizational behaviour. My festschrift, (Huemann et al, 2018), focused on organizational behaviour because that was the focus of my own research, as I outlined in my own paper in that issue, (Turner, 2018).

Julian Pollack (2007) reviewed the hard and soft paradigms of project management. In a research context, the hard paradigm is associated with a positivist epistemology, deductive reasoning and quantitative or reductionist techniques. It emphasises objectivity. A soft paradigm is associated with an interpretivist or constructivist epistemology, inductive or abductive reasoning and exploratory, qualitative techniques. It emphasises contextual relevance. In a practice-based context, the hard paradigm emphasises efficient, expert-led delivery, imposition of structure and control against predefined gaols. The focus is on problem solving. The soft paradigm emphasises learning, participation and exploration, and is concerned about underlying social processes. Pollack says the focus is on problem structuring. John Kay and Mervyn King (2020) say that in simpler situations we meet problems or puzzles, which we can solve using deductive techniques, but in more complex situations, which they call radical uncertainty, we are faced with mysteries, which we cannot solve, but better understand using inductive or abductive narratives.

There has been a divergence between research in project management and conventional project management, as represented by the standards produced by the professional associations, such as PMI's Guide to the Project Management Body of Knowledge, (PMI, 2020). In developing their standards, the professional associations have tended to ignore research. The standards follow the hard paradigm, emphasising control and closing options quickly. They are good at solving problems, but cannot deal with complexity, because they discourage innovation, (Keegan & Turner, 2002. Turner, 2022). However, research in project management is based on the soft paradigm as evidenced by my festschrift, (Huemann et al, 2018). The International Journal of Project Management is categorised by Google Scholar as a journal in organizational behaviour and human resource management. From the first volume there were papers on organizational behaviour and human resource management subjects. Pieter Blankevoort (1983) published a paper on creativity in project management in which he said there was a shift to the soft paradigm in the 1970s, and a paper by Geert Hofstede (1983) on culture.

In our book, Perspectives on Projects, (Turner et al, 2010), we identify nine schools of project management. One of the schools is organizational behaviour, consisting of eight topics including: human resource management; leadership; teams; project organization; project-based organization; competence of project managers; capability of the project-based organization; and ethics. In the following, I review research in each of those eight topics over the past 40 years. I identify the first paper and the most recent paper (at the time of writing) on the topic in the International Journal of Project Management, and describe what I consider to be key research on the topic in the interim. I will also briefly consider research on psychology, cognition and emotion.

Human Resource Management

What has surprised me in preparing this essay is the number of papers on Human Resource Management topics that have appeared in IJPM. When we conducted the research for the Project Management Institute, (Turner et al, 2008a), we honestly thought we were opening a new area of research in project management. There were four papers on HRM topics in Volume 1, (Ford et al, 1983; Goodacre, 1983; Mikkelsen, H & Folmann, 1983; Woodward, 1983). Peter Goodacre's paper is in the first issue, and that and John Woodward's paper are about training and education of project managers, and so also fall under competence below. The other two cover recruitment and selection of project managers, so all four cover topics considered by Turner et al (2008a).

In preparing this essay, I looked at the contents page of every issue of the journal. I did not count the number of papers on each topic, but I formed the impression that HRM was the behavioural topic with the greatest number of papers. An early special issue on the journal, 7(4), (Thompson, 1989), was about training and education of project managers. There was subsequently another special issues on the topic, 26(3), (Atkinson, 2008).

Fabi & Pettersen (1992) did a literature review of HRM in project-based organizations, and found very similar results to those found by Turner et al (2008a) and Huemann et al (2007). They identified the following Human Resource Management practices in project-based organizations: human resource planning; reception; selection; job analysis; remuneration; performance assessment; education and training; career planning.

Martina Huemann, Anne Keegan and I conducted research into HRM in project-oriented organizations, sponsored by the Project Management Institute, (Turner et al, 2008a). We published our literature review in IJPM, (Huemann et al, 2007). We also published a paper on achieving work-life balance as part of the special issue for IRNOP VIII, (Turner et al, 2008b). Jonas Söderlund and Karin Bredin were also researching the topic. They also had a paper in the special issue for IRNOP VIII, (Bredin, 2008). Jonas Söderlund and Karin Bredin published a book, (Bredin & Söderlund, 2011). Martina Huemann, Anne Keegan and I only published the PMI report. However, Martina Huemann researched the topic as part of her PhD and Habilitation, and subsequently published a book, (Huemann, 2015).

At the time of writing, the most recent article on Human Resource Management, (Greer & Carden, 2021), explores a narrower subject of gender wage gaps. An article from late in 2020 returned to the subject of work-life balance, (DeLisle, 2020). Fabi & Pettersen (1992), Turner et al (2008a) and Bredin & Söderlund (2011) painted the big picture of Human Resource Management practices in project-based organizations. People are now researching individual elements of the practices.

Leadership

Leadership is a topic, which along with Human Resource Management, appears to have more papers than other topics. The first paper on Leadership is by Gerry Gilbert (1983) and says that different styles of leadership are required on different types of project. That reflects the research done by Ralf Müller and me, (Müller & Turner, 2007), a quarter of a century later, but went against the thinking of the day, which was that what was important was to use the correct tools and techniques, and the same tools and techniques would work on all projects, (Pinto & Slevin, 1987).

Ralf Müller and I were sponsored by the Project Management Institute to research project leadership, (Turner & Müller, 2006). The aim was to show that the project manager's leadership style is a success factor on projects, and different styles are appropriate for different types of project. The project management literature had studiously ignored the project manager's competence as a success factor on projects, (Turner & Müller, 2005). I jokingly refer to an advertisement I saw for project management software about that time; which said, "If you can move a mouse you can manage a project." Somebody who is totally incompetent can manage a project by using our software – how insulting. There was also a strong belief that any project manager could manage any project, regardless of their leadership style and personality. I tell a story from a PhD I examined, where an American construction company was conducting an organizational change project. Based on this thinking, they got their two best project managers from the field, basically two bullies who were good at kicking subcontractors to complete fixed project contracts on time and cost, and bought them in-house to manage the organizational change projects, where you need to work persuasively with stakeholders. When I tell this story, people laugh. The field of general management has says that different leadership styles are needed in different circumstance, (House, 1971; Goleman et al, 2002), but that was not the thinking in project management.

Ralf Müller and I found that different leadership styles were required on different types of project, (Müller & Turner, 2007). For most emotional intelligence was correlated with success. We were the amongst first to demonstrate that clearly, but subsequently several people have researched emotional intelligence of project managers. But we also showed that on fixed price contracts, managerial competence and not emotional intelligence were important. So people good at managing fixed price contracts will not be good at managing organizational change, and vice versa.

More recently, Ralf Müller has been doing research with others into vertical, horizontal, shared and balanced leadership on projects, (Pilkienė et al, 2018). This is now a strong focus of research into leadership in project management. The most recent paper on leadership, (at the time of writing), is from that school, (Agarwal, 2021).

Teams

Teams is a topic which in the early days had few papers. The first paper in the journal with the word "teams" in the title did not appear until Volume 7, (Tampoe, 1989). A paper appeared three years earlier, (Bolliger, 1986), which from the title said it was about successful project management, but the abstract said that included defining the roles and responsibilities of project team members.

Liselore Havermans wrote an interesting paper on how project leaders can use narratives and the use of language to build project team cohesion, (Havermans et al, 2015). The paper showed how project leaders can use story lines to make teams feel part of the project, and help to resolve conflicts. They of course can create a sense of us and them, but can help to build positive images of external stakeholders. They can also help to build alternative perspectives and resolve problems.

At the time of writing there have been papers on project teams from the past two issues, (Manata et al, 2021. Wang et al, 2021), so the topic is now receiving more attention. As with Human Resource Management, the papers in the early days painted the big picture, but the recent papers have a narrower focus. Wang et al looks at integration in the top management team, and Manata et al look at differentiation of commitment within the project team.

Project Organization

The first paper on project organization appeared in the second issue of the journal, (Hemsley &Vasconcellos, 1983). They wrote about matrix management in Brazil. Much of the early research into project organization was into matrix management. However, matrix management, where an individual reports both to their functional manager and a project manager, does not work. Machiavelli (1532) showed that people cannot have two bosses, and that is why 20 years later Henry VIII made himself head of the Church of England: his subjects could not have split loyalty to him as king and the pope in Rome. The Holy Roman Empire overcame that problem by having the emperor crowned by the pope. Matrix management does not work.

There is now a move towards more process approaches to project organization, (Turner & Peymai, 1995). Following Gobeli & Larson, (1989), I suggest four types of project organization, (Turner, 2014), in all of which the person working on the project has just one boss. In the functional hierarchy, the project is small enough to fit within one department, and so the individual reports to the project manager who reports to the department manager. In the project hierarchy the project is large enough to be made an entity in its own right, and the individual reports to the project manager who reports to the project sponsor or program manager. On intermediate sized projects, where people from two or more departments are working on a single package of work, they have to be seconded onto the project, so the project manager can coordinate their inputs. You cannot have two or more functional managers pulling people in different directions. Where people from just one department are working on a package of work you can second them onto the project. But alternatively, the project manager can ask the functional manager to take responsibility for the package of work. The functional manager agrees to deliver the result by a certain date, but they can then balance the work of people from across their department.

At the time of writing, papers on project organization have appeared in the past two issues, (Denicol et al, 2021; Frederiksen, et al 2021). The first is about the organization of megaprojects and the second is about infrastructure development.

Project-Based Organization

The first paper on the project-based organization appeared quite late, in volume 9, (Selin, 1991). Roland Gareis organized an IPMA Expert Seminar on the topic of management by projects in 1989, followed by the IPMA World Congress in Vienna in 1990. A book of best papers from the conference was produced, (Gareis, 1990), containing several papers on the project-based or project-oriented organization. Many forms of the project-based organization with varying names have been suggested, (Miterev et al, 2017). The project-based organization is project-based perforce; the nature of the work it does required it to adopt project management processes as its primary business processes. The project-oriented organization is project oriented by strategic choice; it decides to adopt project management processes as its primary business processes. The project-led organization uses project management processes to support its main business processes which are routine.

In the late 1990s, Anne Keegan and I attempted to develop a holistic model for the management of the project-based organization. We made some progress in specific areas such as governance, (Turner & Keegan, 2001), organizational learning, (Keegan & Turner, 2001) and innovation, (Keegan & Turner, 2002), but did not achieve the holistic model. Max

Miterev, Mauro Mancini and I, (Miterev et al, 2017), were more successful, basing the design on Jay Galbraith's (2014) star model for organizations. In Jörg Gemünden's festschrift, Max Miterev and I, (Turner & Miterev, 2019), explored the factors which influence the design of the project-based organization. Müller et al (2020) have recently published a book where they explore the management of the project-based organization over several levels.

At the time of writing, the most recent article was about knowledge transfer in the project-based organization, (Mahura & Birollo, 2021). Earlier in the year, Paolo DiMuro, Lawrence Lecoeuvre and I published an article about entrepreneurship in the project-based organization, (DiMuro et al, 2021).

Competence of Project Managers

There was a paper on the education and training of project managers in the first issue, (Goodacre, 1983), and another in the first year, (Woodward, 1989). There have been two special issues on the education and training, (Thompson, 1989; Atkinson, 2008).

Lynn Crawford did her doctorate on the competence of project managers, (Crawford, 2001). She was primarily looking at factors that influence the competence of project managers, but she also developed a model, (Crawford, 2006). In North America, competence is judged by characteristics people have to improve their performance. That includes knowledge, qualifications, experience, and behaviours. In Britain competence is judged by performance against standards. Similarly in Australia, competence is judged by what results people are able to produce. From this Lynn Crawford developed a model for the competence of project managers, consisting of three components:

- *Input competence:* Knowledge, qualifications and experience
- *Personal competence:* underlying attitudes and behaviours
- *Output competence:* Demonstrable performance

She suggested standards for measuring these different components of competence. The International Project Management Association in its four-level certification program suggests required input and personal competencies. The lower levels tend to focus on input competencies, and the higher levels on personal competencies. Ralf Müller and I, (Turner & Müller, 2006), identified desired competencies for project leaders, which were exclusively personal competencies. Crawford (2001) correlated the performance of project managers on the Project Management Institute's PMP test with their competence as a project manager as assessed by their supervisor. On eight of what were then nine body of knowledge areas, there was no correlation between performance on the test and their supervisor's assessment. The PMP test measures input competence, but it is personal competence (including emotional intelligence), which makes the difference between a good and excellent project manager. The one area where there was a correlation was quality, and the correlation was negative. Quality nerds were assessed as being lower performers.

Huemann (2006, 2015) describes the need for organizations to have career structures for project managers, to describe the desired competencies of project managers at different levels, to measure the current performance of project managers, and define what they need to do to progress in their careers.

At the time of writing, the most recent paper in IJPM, (Chan et al, 2021), continues the journal's focus on training, education and learning for project managers. The paper considers how team work can influence the learning of project management professionals.

Capability of the Project-Based Organization

The first paper on organizational capability appeared in IJPM in 1988. I was a co-author, (Turner et al, 1988). Another appeared later that year, (Mansfield, 1988). Subsequently the primary focus has been on maturity in organizations, (Andersen & Jessen, 2003). For many years, research into the capability of organizations disappeared down the rabbit hole of maturity, (Levine & Ward, 2014). People tried to show that more mature organizations had better project performance, (Ibbs & Reginato, 2002). There was a correlation, but the results were not statistically significant. The most significant research was done by Janice Thomas and Mark Mullaly (2008), sponsored by the Project Management Institute. They and their co-workers conducted 64 case studies in 16 countries, and showed organizations implementing project management achieved value from its use.

Ann Ledwith, John Kelley and I conducted research into the use of project management in small to medium sized enterprises, SMEs, (Turner et al, 2009, 2010; Turner & Ledwith, 2018). The last was sponsored by the Project Management Institute. Before our 2009 paper, most work had been done on large projects in large organizations. SMEs do smaller projects, and there tends to be a greater focus on people than systems. People also tend to multi-task whereas larger organizations employ specialists. Larger organizations spend 5% of the cost of the project on project management, (Turner, 2014), but SMEs can spend up to 30%. SMEs still gain value from the use of project management. At the time of writing, the most recent paper in the journal on the capability of organizations has continued the focus on SMEs, (Guertler & Sick, 2021).

Ethics

Ethics is the topic on which the least research has been done. Above, I mentioned the paper on achieving work-life balance, (Turner et al, 2008b), which also touches on ethical leadership. The next paper on ethical behaviour on projects appeared in IJPM in Volume 25, (Suen et al, 2007). Since then three other papers have appeared claiming to be about ethics, (Helgadóttir, 2008; Corvellec, & Macheridis, 2010; Khan & Raheed, 2015). However, Helgadóttir's paper is about teaching ethics on a masters program in Iceland and so is really about training and education of project managers,. Khan and Rashed is about organizations adopting appropriate Human Resource Management practices. So in 40 years IJPM has published 2 papers about ethical behaviour on projects. We will see shortly that I am co-author of three papers published in the Project Management Journal, (Müller et al, 2013, 2014, 2016). So we have published more papers in the Project Management Journal than IJPM has published in total. IJPM has also published papers on the related topic of trust. The first was by Anna Kadefors (2004) in Volume 22. At the time of writing, a paper in the most recent issue, 39(4) is about trust on megaprojects, (Vukomanović et al, 2021).

Ethics is not a subject that interests project managers. I attended the first IPMA Research Conference in Berlin in September 2015. During the conference we conducted an exercise on how practitioners access knowledge from academics. The practitioners in one room were given three project scenarios to consider. Academics were sent to another room to create knowledge tables. Because I had recently published two of the papers, (Müller et al, 2013, 2014), I decided to form an ethics table. I thought I would be on my own, but I was joined by

Christophe Bredillet and three others. The conference had produced a model showing knowledge areas of project management, Figure 1. (The right-hand side of the estuary was what practitioners do.) There are four broad knowledge areas: economy (time cost quality and income); sociology (behavioural); psychology (see below); and ethics. Although ethics was clearly shown as a knowledge area of interest, not one of the practitioner teams came to the ethics table. All three scenarios had an ethical issue, and with one, you had to decide whether it was ethically acceptable to share information about a project team member with Human Resource Management before you could begin. Not one of the practitioner teams thought ethics was an issue.
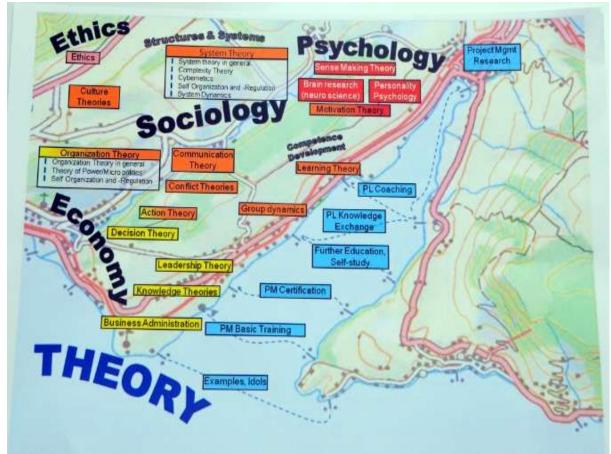

Figure 1: Academics topics, IPMA Research Conference, September 2015.

The best research on the fundamentals of ethical behaviour on projects was conducted by Alistair Godbold for his masters thesis at Henley Management College, supervised by me. This was published in the Gower Handbook of Project Management, (Godbold, 2007). Recent academic research was conducted by me and my co-workers, (Müller et al, 2013, 2014, 2016). We investigated the types of ethics issues project managers encounter, and how the governance structure influences their responses.

Psychology, cognition and emotion

Areas that have received almost no focus up to now, but which are perhaps areas for new research are psychology, cognition and emotion. Alicia Aitken and Lynn Crawford (2007) wrote about strategies for dealing with stress. Earlier this year, Malik et al (2021) wrote about psychological empowerment in agile processes. Roya Derakhshan and I have written a paper under consideration by the journal which considers how cognition and emotion

influence stakeholder engagement, (Derakhshan & Turner, 2020), and I have written a paper, also under consideration by the journal on how emotional regulation influences decision making, (Turner, 2021).

Summary

I have reviewed research into organizational behaviour and Human Resource Management in project management from the past forty years, focusing on the contribution of the International Journal of Project Management.

1. In the area of Human Resource Management, Turner et al (2008a) and Bredin & Söderlund (2011) identified the practices of Human Resource management in a project context. Current research is into improving our understanding of individual components.
2. In leadership, the significant advance was to recognise that the project manager's leadership competence, in particular their emotional intelligence, is a significant success factor on projects, and that different styles of leadership are required on different types of project, (Turner & Müller, 2006). There is now research being done on vertical, horizontal, balanced and shred leadership. I think going forward, there needs to be a move away from project leaders using deductive thinking to solve problems as suggested by the project management standards towards using inductive thinking to elaborate mysteries and complexity.
3. Work on project teams needs to look at social representation in project teams, (Drouin & Turner, 2022, Moscovici, 1973). Traditional approaches to team building, (Tuckman, 1965), emphasize deductive method to solving problems in a narrow context. There should be a greater focus on building communities and providing people with a code for social exchange and naming and classifying unambiguously the various aspects of their world to deal with the complexity behavioural issues create.
4. Müller et al (2019) give a very thorough description of the current state of the art of project organization, and project-based organization, in their coverage of organizational project management. Their onion model shows the different levels of the organization of project management, and its different components. Perhaps as with Human Resource Management and teams, they have no painted the big picture, and research in the immediate future will be exploring how individual elements work in specific contexts.
5. With competence, Lynn Crawford's work (2001, 2006) showed that most people who are project managers are reasonably competent in the 10 PMI body of knowledge areas, but being more competent in those areas does not make them better project managers. What makes them better project managers is being personal competencies, including emotional intelligence, (Turner & Müller, 2006), being able to delegate through horizontal, balanced or shared leadership, and being competent in organizational behaviour issues. Research needs to explore what makes project managers better project managers, and that will probably be personal and output competencies rather than input competencies. Perhaps we need new models.
6. Thankfully work on the capability of project-based organizations has escaped from the rabbit hole of maturity. Müller et al (2019) and Sankaran et al (2017) have defined the capability requirements of organizational project management. They have drawn the big picture. Research going forward will define what elements of that mean in different contexts.
7. The international Journal of Project Management needs to take an interest in ethical behaviour on projects. A special issue on the subject in the International Journal of Managing Projects in Business only attracted three papers. So perhaps project management practitioners need to take an interest in the topic.

8. Research into psychology, cognition and emotion are new areas of research.

Organizational behaviour has been well researched in the field of project management in the 40 year life of the International Journal of Project Management. However, research is never finished, exploring new areas and contexts that were not known of 40 years ago. Better knowledge of organization behaviour and organizational project management can enhance the performance of project management professionals.

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