

A specialist-generalist perspective of project management

By Alan Stretton

ABSTRACT

This paper discusses some attributes of project management that derive from depicting the project manager as a 'specialist-generalist'. The sense of this descriptor is that, although the project manager is operating in the 'specialist' domain of projects, he/she is commonly (although not always) applying a broad range of 'generalist' management skills to that specialist domain in the course of managing projects.

The framework for discussion comes from a section entitled "Areas of Expertise" in the 2004 PMBOK Guide. The discussion first focuses on components of project management which are predominately specialist to projects. These include CPM, WBS and Earned Value, together with many others, some of which are markedly application-area-specific. This is followed by discussing areas of project management which are a mixture of both specialist and generalist components. Prominent in these are elements of the PMBOK Guide, notably managing the project life cycle, the five PM process groups, and the ten knowledge areas. Also included are application knowledge areas, etc; and understanding the project environment. Finally, I discuss two specific areas which are predominately generalist, namely general management knowledge and skills, and interpersonal skills.

It is concluded that specialist-generalist perspectives on project management can help in clarifying its nature, particularly in recognising that a good deal of the knowledge associated with project management can be properly represented as knowledge of basic 'generalist' management and supporting disciplines being applied in the 'specialist' project context.

INTRODUCTION

This paper discusses some materials from the project management literature which support the depiction of the project manager as a 'specialist-generalist'.

We first look at definitions of 'specialist' and 'generalist' from two dictionaries.

Specialist A person who specially or exclusively studies a subject or a particular branch of a subject. Opp generalist (*New Shorter Oxford English Dictionary*)

One who devotes himself to one subject, or to one particular branch of a subject or pursuit (*Macquarie Concise Dictionary*)

Generalist A person trained or competent in several different fields or subjects.
Opp. Specialist (New Shorter Oxford English Dictionary)

A person with a broad education and ability to grasp basic concepts in various fields (opposed to specialist) (Macquarie Concise Dictionary)

These definitions confirm the commonly understood meanings of these two words. We now go on to look at the 'specialist-generalist' combination in the project management context.

The first time I heard a project manager described as a specialist-generalist was in the late 1960s, in a short internal educational film in Lend Lease Corporation, spoken by its chief executive, G J Dusseldorp. This seemed to me at the time a very appropriate descriptor. It still seems to me to be both appropriate, and also useful, as further discussed in the following.

A FRAMEWORK FOR DISCUSSION

I will use the following quotation from the 3rd edition of the PMBOK Guide (PMI 2004:12) as a framework for discussion of the specialist-generalist notion.

Much of the knowledge and many of the tools and techniques for managing projects are unique to project management, such as work breakdown structures, critical path analysis, and earned value management. However, understanding and applying the knowledge, skills, tools, and techniques, which are generally regarded as good practice, are not sufficient alone for effective project management. Effective project management requires that the project management team understand and use knowledge and skills from at least five areas of expertise:

- *The Project Management Body of Knowledge*
- *Application area knowledge, standards and regulations*
- *Understanding the project environment*
- *General management knowledge and skills*
- *Interpersonal skills*

I am using this quotation from the 3rd edition of the PMBOK Guide (PMI 2004) because it, and its further development of the five bullet points, cover some aspects of the specialist-generalist range in substantially more detail than in the 4th edition (PMI 2008) or the 5th edition (PMI 2013) of the PMBOK Guide.

PREDOMINATELY SPECIALIST COMPONENTS OF PROJECT MANAGEMENT

Much of the knowledge and many of the tools and techniques for managing projects are unique to project management, such as work breakdown structures, critical path analysis, and earned value management. (PMI 2004:12)

It is perhaps debatable which tools and techniques are unique to project management. The uniqueness of the three in the above quote does not appear to be in doubt.

However, in discussing the specialist components of project management, it might be more appropriate to talk about core tools of project management, to adopt a descriptor used by Morris 1994.

Morris 1994 discussed practices initiated by the US Secretary of Defense, Robert McNamara, on defence projects in the first half of the 1960s, partly as follows.

McNamara initiated a period of centralization of defence planning and authority. Amongst the practice introduced during his tenure were the Five Year Defense Plan; the Planning, Programming, Budgeting System (PPBS); Systems Analysis: Life-Cycle Costing; greater emphasis on front-end Concept Formulation and Contract Definition; new planning and reporting system requirements (C/SCSC, SAIMS and SAR); Should-Cost analysis; Integrated Logistics Support; Quality Assurance; Value Engineering; Technical Data Management; Configuration Management; and the Work Breakdown Structure. All these practices and techniques, except perhaps for PPBS and Systems Analysis, have become core tools of modern project management.....

Morris also identifies some tools which came in later, including Design-to-Cost, Construction Management, Prototyping, Simultaneous Engineering, Risk Management, Total Quality Management, some of which may, or may not, be regarded as core tools, particularly the latter two.

I will not attempt to list tools and techniques which would be broadly recognised as specialist core tools in the project management arsenal. I doubt that anyone could come up with a list which would be universally accepted. One of the problems is that different tools are relevant to different application areas. For example, in my forty years in the construction industry, I had never heard of configuration management, nor had anyone else I knew in that industry. Much the same can be said of risk management. On the other hand, I understand that the pharmaceuticals industry has little need for earned value management, but that this is common in projects in the manufacturing industry (Hatfield 2013), as well as many areas in construction.

Summarising these discussions on predominately specialist components of project management, there are evidently many tools and techniques which are specialist core tools for project management, even if we cannot list them all with certainty.

The way project management is commonly represented in the literature might lead one to believe that the major part of the project management task is a specialist one. However, it can be argued that much of the project management task has substantial generalist components. This tends to emerge from the following analysis, which addresses the first three bullet points in the Framework's lead quotation.

COMBINED SPECIALIST-GENERALIST COMPONENTS OF PROJECT MGT.

The Project Management Body of Knowledge

PMI 2004:12 first points out that its PMBOK Guide is a subset of the larger Project Management Body of Knowledge. It then describes the broad content of the PMBOK Guide as follows [first two items transposed]

The knowledge of project management described in the PMBOK Guide consists of:

- Project life cycle definition
- Five project management process groups
- Nine knowledge areas [now ten in PMI 2013, as later listed]

Project life cycle definition

*...what really distinguishes projects from non-projects is their development cycle....
Morris 2004*

If Morris is right, then the project development cycle, or life cycle, is specific to project management, and thence the management of the project life cycle is specialist project management work.

However, Turner 1993 has shown how the management of the project life cycle can be depicted as the application of five basic general management functions to the phases/stages of the project life cycle.

Turner 1993:20-21 first discusses the classical view of basic general management processes, which has five basic management functions – four direct and one integrative, as represented in Figure 1 below.

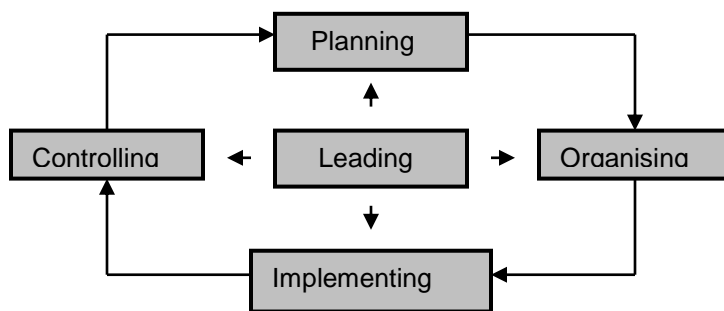


Figure 1: Turner 1993, Figure 2.1 Five functions of management

Turner 1993:24 then demonstrates how the basic general management processes depicted in Figure 1 above are applied to the project life cycle. This is shown in Figure 2 below, where it can be seen that the basic management processes are applied to each phase of the project life cycle in turn, with 'leading' being an unwritten integrating function in each case.

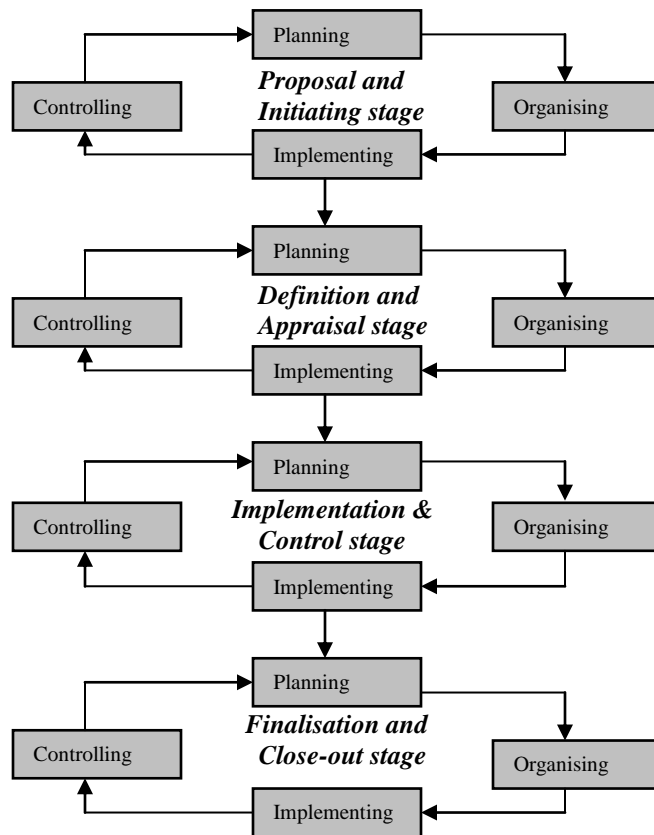


Figure 2: Turner 1993, Figure 2.4 Repeating the processes at each stage

I have presented this figure previously (e.g. Stretton 2010h), but present it again here, because it is the most detailed demonstration of the application of basic general management processes to the management of a specialist sector of project management that I have seen in the literature. In this situation, the project manager is indeed very much a specialist-generalist.

Five project management process groups

The five project management process groups in PMI 2004:38 are

- Initiating process group
- Planning process group
- Executing process group
- Monitoring and controlling process group
- Closing process group

The application of basic general management functions to the Initiating and Closing processes has been demonstrated in the corresponding phases of the project life cycle in

Figure 2. Planning, Executing and Monitoring/Controlling have similarly been identified in Figure 1 as being basic management functions. Once again, this exhibits the combined specialist-generalist roles of the project manager.

Nine knowledge areas [now ten in PMI 2013]

The (now) ten knowledge areas in the PMBOK Guide are

- Project integration management
- Project scope management
- Project time management
- Project cost management
- Project quality management
- Project human resource management
- Project communications management
- Project risk management
- Project procurement management
- Project stakeholder management

The basic components of at least some of these knowledge areas were covered in traditional general management writings long before project management emerged as a discipline.

For example, time management and cost management were nominated as specific components of the basic management function of 'planning' by Allen 1962 (and had undoubtedly been nominated by others well before Allen). The same applies to communications management, which is named as a specific component of the basic management function of 'leading' by both Allen 1962, and Koontz & O'Donnell 1978. Human resource management covers many aspects of people management, again covered by Allen 1962 under 'leading', and Koontz & O'Donnell 1978 under 'leading' and 'staffing'.

Quality management and procurement management would have been part of most general management processes; whilst integration management is a key responsibility of general management. The components of the remaining three knowledge areas, namely scope, risk, and stakeholder management, would also appear to have general management equivalents.

Therefore, to varying extents, the project management processes associated with the ten project management knowledge areas can reasonable be represented as general management processes being applied in the project context, and reinforce the relevance of a specialist-generalist perspective on project management.

In summary, we have seen how the basic management functions have been applied to the project life cycle, three project management process groups, and ten knowledge areas. To varying degrees, all demonstrate specialist-generalist combinations when applied in the project context.

We now turn to the second and third bullet points of the Framework's lead quotation.

Application area knowledge, standards and regulations

PMI 2004:13 describes application areas as categories of projects that have common elements significant in such projects, but are not needed or present in all projects. It says that application areas are usually defined in terms of:

- Functional departments and supporting disciplines
- Technical elements
- Management specializations
- Industry groups

PMI 2004 goes on to point out that each application area has a set of accepted standards and practices, which are often codified in regulations.

It can be reasonably commented that similar considerations to the above also apply in the general management context, so that these are not particularly unique to project management. In a rather different way to the PMBOK Guide elements, they can be seen as being part of the combined specialist-generalist category.

Understanding the project environment

PMI 2004:14 goes on to point out that virtually all projects are carried out in social, economic, and physical environmental contexts, and impact on them. Projects should therefore understand these contexts, which include:

- Cultural and social environment
- International and political environment
- Physical environment

Again, it is argued that similar considerations apply with the general management environment, so that these types of environmental contexts are not particularly unique to project management. This component also appears to belong to the combined specialist-generalist category.

Summarising combined specialist-generalist components

The major part of this discussion has been concerned with the first bullet point in the lead quotation, which is concerned with elements of the PMBOK Guide. All of these have been identified as involving the application of basic general management disciplines to specialist project domains. In the cases of the project life-cycle, and initiating and closing process groups in particular, the relevant project domains are particularly project-specialised. In some of the knowledge areas such as time and cost management, project-specialised tools exist to facilitate their management in the project context. There are knowledge areas

where such project-specialised processes or tools are not so immediately available, but which are widely regarded as having significant project-specialist content. Therefore, all these cases naturally belong to the combined specialist-generalist category.

PREDOMINATELY GENERALIST COMPONENTS OF PROJECT MANAGEMENT

We now look at the final two bullet points in the Framework's lead quotation.

General management knowledge and skills

PMI 2004:15 says that general management basically encompasses the five basic functions shown in Figure 1 above. It goes on to point out that general management includes supporting disciplines, such as:

- Financial management and accounting
- Purchasing and procurement
- Sales and marketing
- Contracts and commercial law
- Manufacturing and distribution
- Logistics and supply chain
- Strategic planning, tactical planning, and operational planning
- Organisational structures, organisational behaviour, personnel administration, compensation, benefits, and career paths
- Health and safety practices
- Information technology

It is also noted here that APM 2013 has a Section 4 - Interfacing, whose components generally fall into the support discipline management category:

- 4.1 Accounting
- 4.2 Health and safety
- 4.3 Human resource management
- 4.4 Law
- 4.5 Security
- 4.6 Sustainability

This is a shorter list than the PMI list above. However, it is noted that there are specific topics in APM 2013 which cover some of the PMI 2004 'supporting disciplines' above, including financial management and accounting, and health and safety practices.

In both bodies of knowledge, the general management supporting disciplines are regarded as a vital part of project management. The main difference is that PMI does not expand on these in the project context, whereas APM does. In both cases, these clearly belong to the predominately generalist category.

Interpersonal skills

Both PMI 2004 (and PMI 2013 in an appendix) and APM 2013 have listings of desirable interpersonal skills which they believe a project manager should have, or which should be covered within the project team.

In PMI 2013, interpersonal skills are now contained in an appendix (X3), and cover the following items, which are expanded on in some detail:

- Leadership
- Team building
- Motivation
- Communication
- Influencing
- Decision making
- Political and cultural awareness
- Negotiation
- Trust building
- Conflict management
- Coaching

It is also noted here that APM 2013 lists the following interpersonal skills.

- Communication
- Conflict management
- Delegation
- Influencing
- Leadership
- Negotiation
- Teamwork

These interpersonal skills appear to be equally applicable to the general management context, and clearly belong to the predominately generalist category.

Summarising these final two predominately generalist components of program management, it should be observed that applying them effectively in the project context still requires a good understanding of each individual project's situation and attributes.

DISCUSSION

This specialist-generalist perspective has identified three relevant components of project management. First are those components of project management which are predominately specialist to projects. Second are areas of project management which combine both specialist and generalist components. Third are areas which are predominately generalist.

The term 'generalist' in this context means basic general management (and supporting) disciplines being applied in the project context. What has emerged is that generalist components of project management are a good deal more important than is generally

acknowledged in the relevant literature, particularly in the combined specialist-generalist area, which is the main preoccupation of the PMBOK Guide.

This recognition also tends to support Peter Morris' descriptor "management of projects", rather than "project management" (Morris 1994:viii). Although this perspective has been embraced by some others (e.g. APM 2006:xiv), it has not been taken up nearly as widely as I believe it deserves to be. Perhaps this specialist-generalist perspective may help further this understanding of the nature of the management of projects.

Finally, I want to acknowledge Terence Blythman's help in re-directing some of my thinking in earlier drafts of this paper.

REFERENCES

- ALLEN Louis A 1962. *Professional Manager's Guide*. Accompanying the Louis A Allen Profession of Management Program (mimeo).
- APM (Association for Project Management) 2013. *APM Body of Knowledge*. 6th Edition. High Wycombe, UK; Association for Project Management.
- APM (Association for Project Management) 2006. *APM Body of Knowledge*. 5th Edition. High Wycombe, UK; Association for Project Management.
- HATFIELD Michael 2013. "Advances in project management series: The coming sea-change in project management science". *PM World Journal*, Vol II, Issue I, January.
- KOONTZ H & C O'DONNELL 1978. *Essentials of management*. New Delhi, Tata McGraw-Hill.
- MORRIS, Peter W G 2004. "The irrelevance of project management as a professional discipline". INDECO Management Solutions, March.
- MORRIS, Peter W G 1994. *The Management of Projects*. London, Thomas Telford
- PMI (PROJECT MANAGEMENT INSTITUTE) 2013a. *A Guide to the Project Management Body of Knowledge*. 5th Edition, Newtown Square, PA; Project Management Institute
- PMI (PROJECT MANAGEMENT INSTITUTE) 2008a. *A Guide to the Project Management Body of Knowledge*. 4th Edition, Newtown Square, PA; Project Management Institute
- PMI (PROJECT MANAGEMENT INSTITUTE) 2004. *A Guide to the Project Management Body of Knowledge*. 3rd Edition, Newtown Square, PA; Project Management Institute
- STRETTON Alan 2010h "Relationships between project management and general management". *PM World Today*, Vol XII, Issue VIII, August.
- TURNER J Rodney 1993. *The Handbook of Project-Based Management*. London, McGraw-Hill.

About the Author



Alan Stretton, PhD

Faculty Corps, University of Management
and Technology, Arlington, VA (USA)

Life Fellow, AIPM (Australia)



Alan Stretton is one of the pioneers of modern project management. He is currently a member of the Faculty Corps for the University of Management & Technology (UMT), USA. In 2006 he retired from a position as Adjunct Professor of Project Management in the Faculty of Design, Architecture and Building at the University of Technology, Sydney (UTS), Australia, which he joined in 1988 to develop and deliver a Master of Project Management program. Prior to joining UTS, Mr. Stretton worked in the building and construction industries in Australia, New Zealand and the USA for some 38 years, which included the project management of construction, R&D, introduction of information and control systems, internal management education programs and organizational change projects. He has degrees in Civil Engineering (BE, Tasmania) and Mathematics (MA, Oxford), and an honorary PhD in strategy, programme and project management (ESC, Lille, France). Alan was Chairman of the Standards (PMBOK) Committee of the Project Management Institute (PMI®) from late 1989 to early 1992. He held a similar position with the Australian Institute of Project Management (AIPM), and was elected a Life Fellow of AIPM in 1996. He was a member of the Core Working Group in the development of the Australian National Competency Standards for Project Management. He has published over 120 professional articles and papers. Alan can be contacted at alanailene@bigpond.com.au.